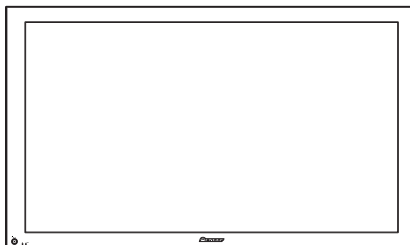


# Service Manual



PDP-436PE

ORDER NO.  
**ARP3271**

PLASMA DISPLAY

# PDP-436PE PDP-436PU

**THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).**

Model	Type	Power Requirement	Remarks
PDP-436PE	WYVI	AC220 - 240V	
PDP-436PU	KUCXC	AC120V	


**Note:**

Media Receivers up to Generation 5 (G5) cannot be connected with this unit.  
Be sure to use a Media Receiver of Generation 6 (G6) (ex.: PDP-R06\*\*, etc.).



For details, refer to "Important Check Points for good servicing".

# SAFETY INFORMATION



**This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.**

**Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.**



## WARNING

**This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.**

Health & Safety Code Section 25249.6 - Proposition 65



## NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

## REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

## SAFETY PRECAUTIONS

**NOTICE :** Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.

6. Perform the following precautions against unwanted radiation and rise in internal temperature.
  - Always return the internal wiring to the original styling.
  - Attach parts (Gasket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
  - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
  - Make sure that the panel vent does not break. (Check that the cover is attached.)
  - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
  - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

### Leakage Current Cold Check

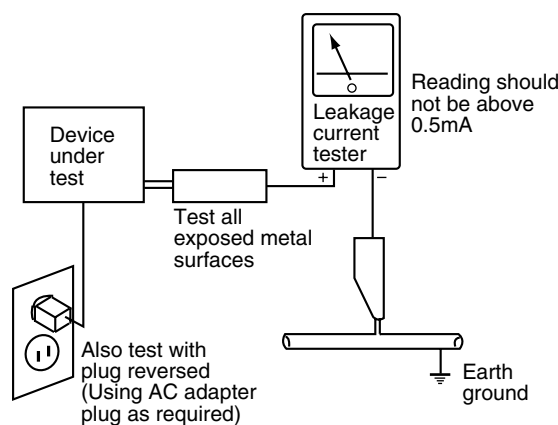
With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of  $0.3M\Omega$  and a maximum resistor reading of  $5M\Omega$ . Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

### Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).

Turn the AC power switch on.

Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



AC Leakage Test

**ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.**

### PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a  $\Delta$  on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

A

### ■Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.

If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

B

1. Power Cord
2. AC Inlet
3. Power Switch (S1)
4. Fuse (In the POWER SUPPLY Unit)
5. STB Transformer and Converter Transformer  
(In the POWER SUPPLY Unit)
6. Other primary side of the POWER SUPPLY Unit

### ■High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

If the procedures described in “7.1.5 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM” are performed before the power is turned off, the voltage will be discharged in about 30 seconds.

1. POWER SUPPLY Unit.....(205V)
2. 43 X DRIVE Assy ..... (-180V to 205V)
3. 43 Y DRIVE Assy ..... (500V)
4. 43 SCAN A Assy ..... (500V)
5. 43 SCAN B Assy ..... (500V)
6. SUS CLAMP 1 Assy .....(-180V to 205V)
7. SUS CLAMP 2 Assy .....(-180V to 205V)

C

■ : Part is Charged Section.

■ : Part is the High Voltage Generating Points other than the Charged Section.

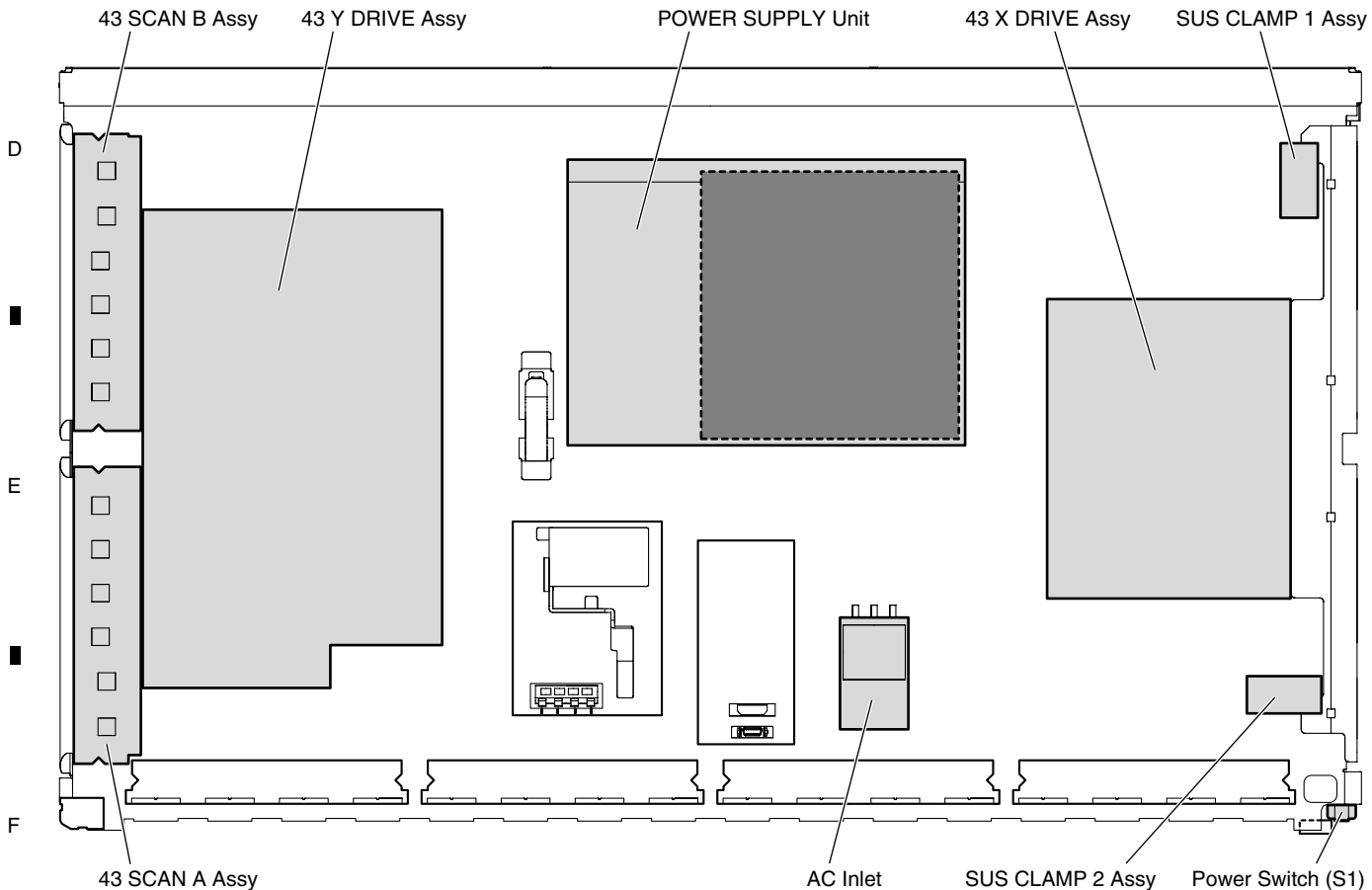


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

## [Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol. Please be sure to confirm and follow these procedures.

### 1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris. Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs. In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages. If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries. Please pay attention to your surroundings and repair safely.

### 2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification. Adjustments should be performed in accordance with the procedures/instructions described in this manual.

### 3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance. Make sure the proper amount is applied.

### 4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

### 5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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# 1. SPECIFICATIONS

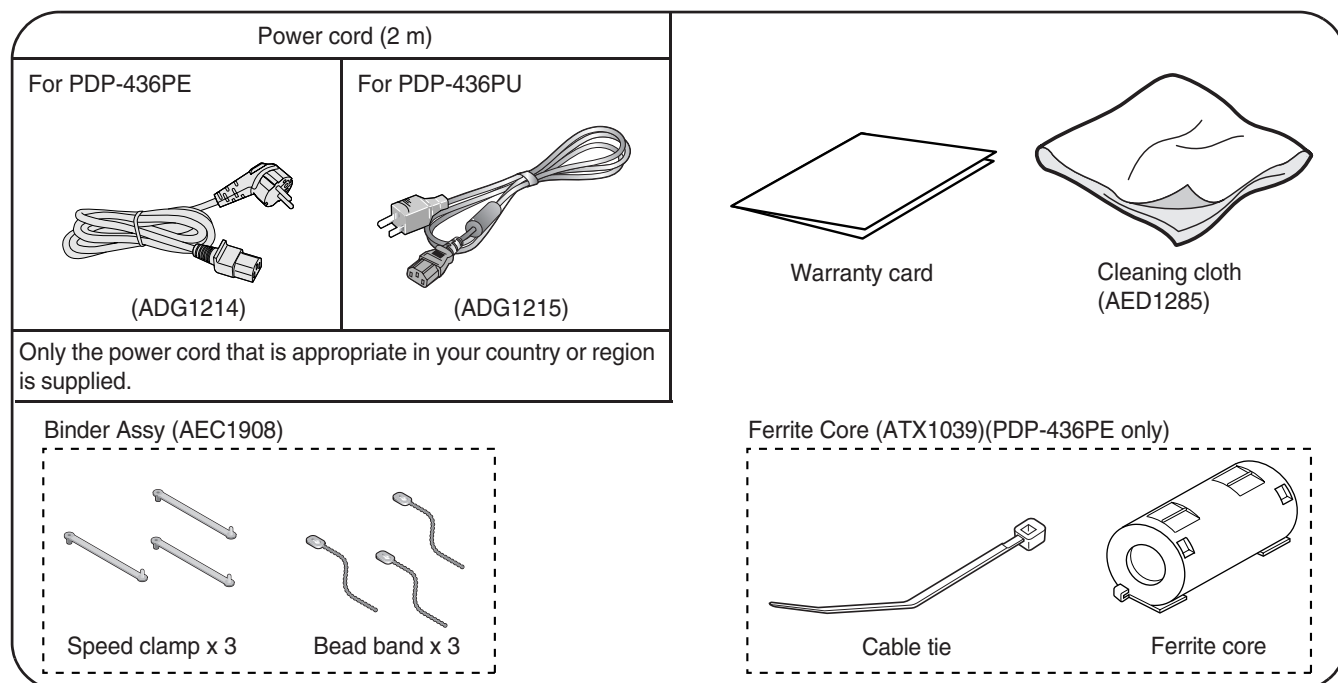
Item	43" Plasma Display, Model: PDP-436PE	43" Plasma Display, Model: PDP-436PU
Number of Pixels	1024 × 768 pixels	1024 × 768 pixels
Audio Amplifier	13 W + 13 W (1 kHz, 10 %, 8Ω)	13 W + 13 W (1 kHz, 10 %, 8Ω)
Surround System	SRS/FOCUS/TruBass	SRS/FOCUS/TruBass
Power Requirement	220 - 240 V AC, 50/60 Hz, 344 W (0.4 W Standby)	120 V AC, 60 Hz, 296 W (0.2 W Standby)
Dimensions	1076 (W) × 632 (H) × 92 (D) mm	1076 (W) × 632 (H) × 92 (D) mm (42 3/8 (W) × 24 29/32 × (H) 3 5/8 × (D) inches)
Weight	25.8 kg (56.9 lbs.)	25.8 kg (56.9 lbs.)

- Design and specifications are subject to change without notice.


## Trademarks

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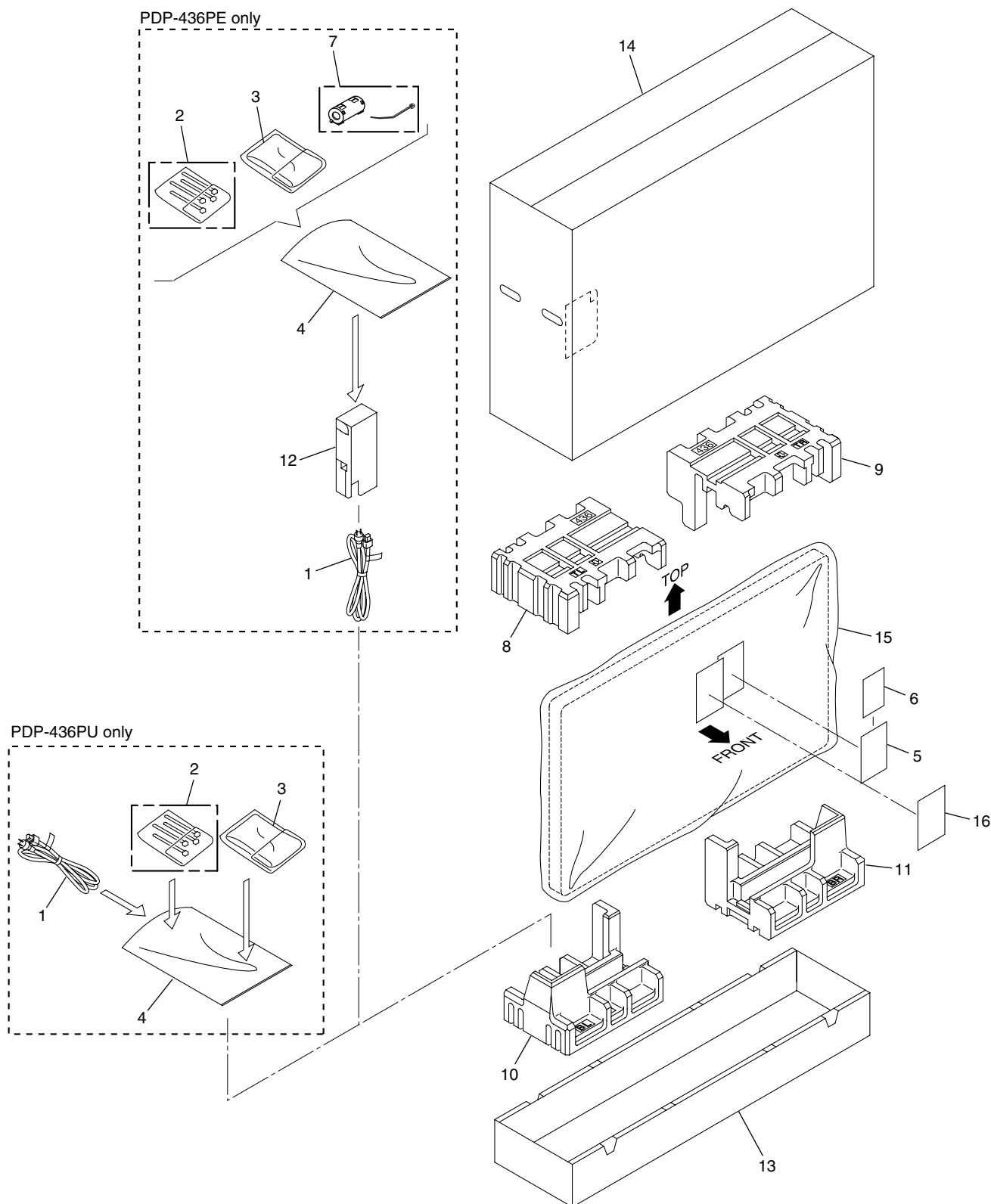
## Accessories



## 2. EXPLODED VIEWS AND PARTS LIST

- NOTES:
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
  - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
  - Screws adjacent to ▼ mark on product are used for disassembly.
  - For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)

### 2.1 PACKING SECTION



PDP-436PE



## (1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
⚠	1	Power Cord	See Contrast table (2)
	2	Binder Assy	AEC1908
	3	Cleaning Cloth	AED1285
	4	Polyethylene Bag S	See Contrast table (2)
NSP	5	Catalogue Bag	See Contrast table (2)
NSP	6	Warranty card	See Contrast table (2)
⚠	7	Ferrite Core	See Contrast table (2)
	8	Pad (43T-L)	See Contrast table (2)
	9	Pad (43T-R)	See Contrast table (2)
	10	Pad (43B-L)	See Contrast table (2)
	11	Pad (43B-R)	See Contrast table (2)
	12	Power Cord Case	See Contrast table (2)
	13	Under Carton	See Contrast table (2)
	14	Upper Carton	See Contrast table (2)
	15	Mirror Mat	See Contrast table (2)
	16	Caution Card	See Contrast table (2)

## (2) CONTRAST TABLE

PDP-436PE/WYVI and PDP-436PU/KUCXC are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436PE/WYVI	PDP-436PU/KUCXC
⚠	1	Power Cord	ADG1214	ADG1215
	4	Polyethylene Bag S	AHG1338	AHG1348
NSP	5	Catalogue Bag	AHG1340	AHG1347
NSP	6	Warranty Card	ARY1114	ARY1145
⚠	7	Ferrite Core	ATX1039	Not used
	8	Pad (43T-L)	AHA2431	AHA2463
	9	Pad (43T-R)	AHA2432	AHA2464
	10	Pad (43B-L)	AHA2433	AHA2465
	11	Pad (43B-R)	AHA2434	AHA2466
	12	Power Cord Case	AHC1073	Not used
	13	Under Carton (436)	AHD3346	Not used
	13	Under Carton (436PU)	Not used	AHD3380
	14	Upper Carton (436PE)	AHD3368	Not used
	14	Upper Carton (436PU)	Not used	AHD3384
	15	Mirror Mat	AHG1284	AHG1352
	16	Caution Card	ARM1232	ARM1239

1 2 3 4

# 2.2 REAR SECTION

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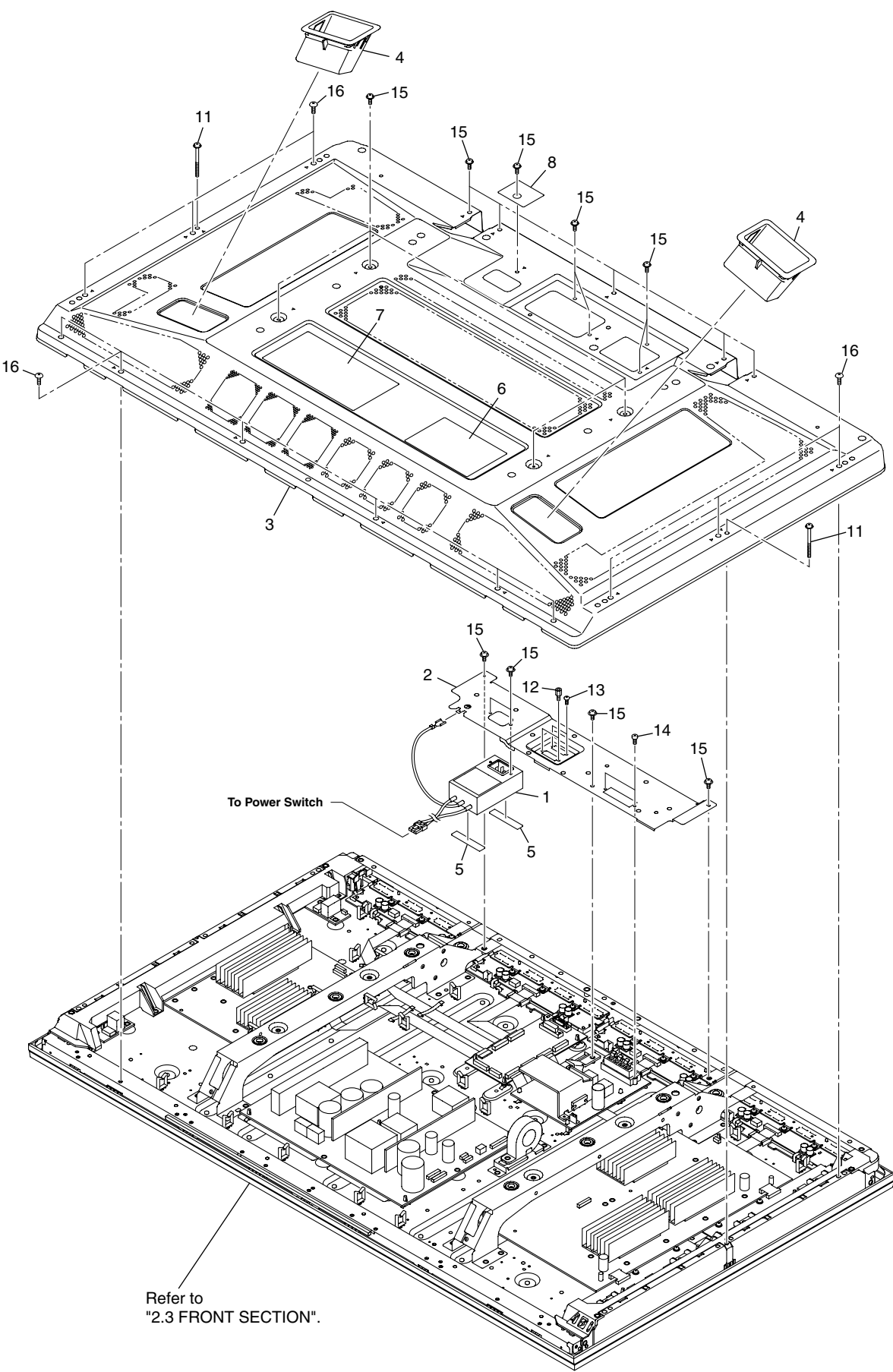
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## (1) REAR SECTION PARTS LIST

Mark	No.	Description	Part No.
⚠	1	AC Inlet	AKP1274
	2	Control Plate	AND1185
	3	Rear Case (436)	ANE1640
	4	Inner Grip Assy	AMR3434
	5	AC Cushion	AEC2035
NSP	6	Model Label	See Contrast table (2)
	7	Caution Label	See Contrast table (2)
	8	AC Label PE	See Contrast table (2)
	9	•••••	
	10	•••••	
	11	Screw (3 x 40P)	ABA1332
	12	Hexagon Head Screw	BBA1051
	13	Screw	PMZ26P060FTB
	14	Screw	BPZ30P080FTB
	15	Screw	AMZ30P060FTB
	16	Screw	TBZ40P080FTB

## (2) CONTRAST TABLE

PDP-436PE/WYVI and PDP-436PU/KUCXC are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436PE/WYVI	PDP-436PU/KUCXC
NSP	6	Model Label (436PE)	AAL2670	Not used
NSP	6	Model Label (436PU)	Not used	AAL2680
	7	Caution Label	AAX3117	AAX3075
	8	AC Label PE	AAX3194	Not used

1 2 3 4

# 2.3 FRONT SECTION

A

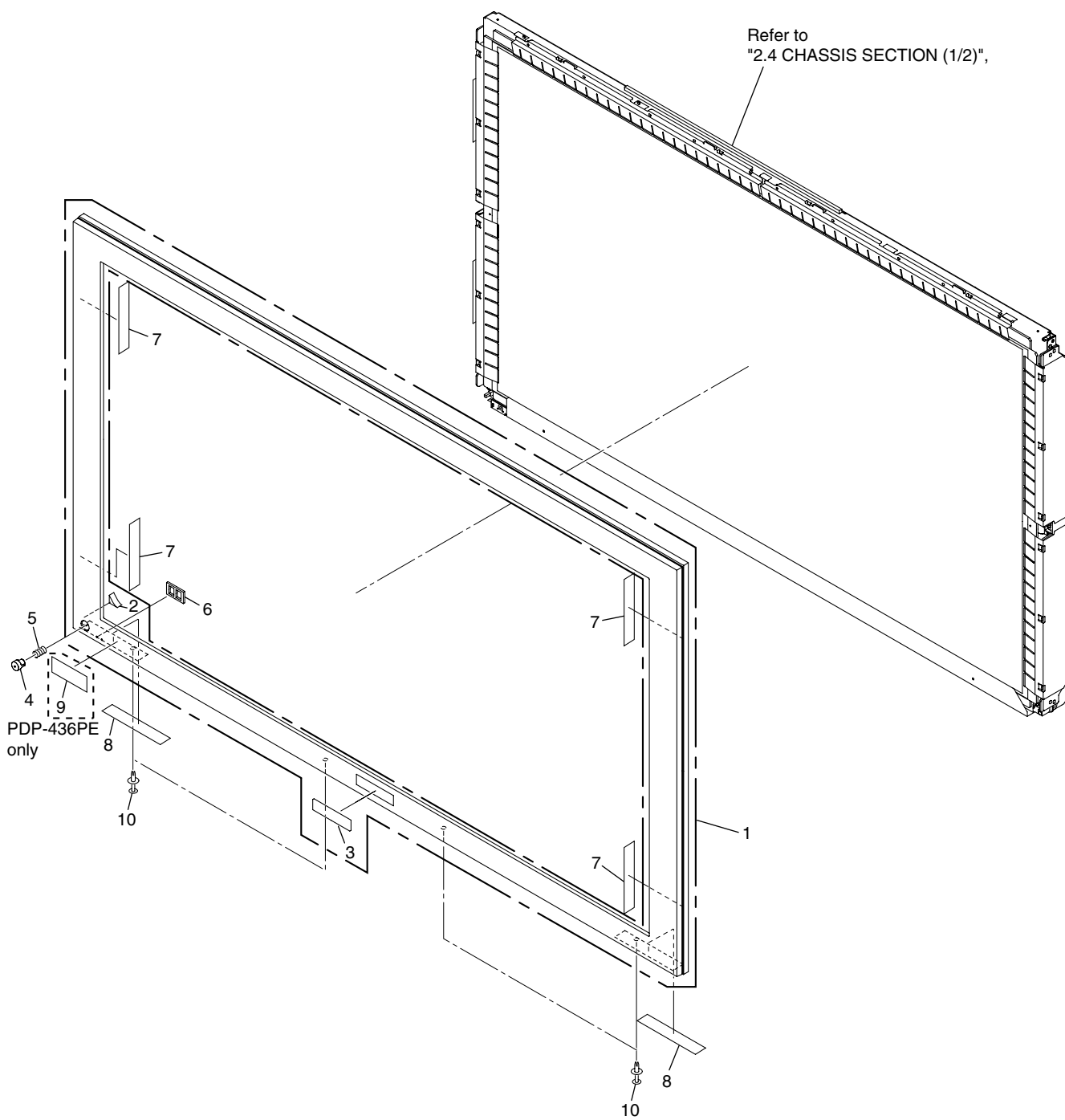
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**(1) FRONT SECTION PARTS LIST**

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Front Case Assy (436PE)	AMB2855
2	Corner Cushion	AEB1416
3	Pioneer Name Plate	AAM1096
4	Power Button	AAD4133
5	Coil Spring	ABH1120
6	Blind Cushion	AEB1415
7	Insulation Sheet A	AED1283
8	Insulation Sheet B	AED1284
9	Power Display Label (436)	See Contrast table (2)
10	Screw Rivet	AEC1877

**(2) CONTRAST TABLE**

PDP-436PE/WYVI and PDP-436PU/KUCXC are constructed the same except for the following:

<b>Mark</b>	<b>No.</b>	<b>Symbol and Description</b>	<b>PDP-436PE/WYVI</b>	<b>PDP-436PU/KUCXC</b>
	9	Power Display Label (436)	AAX3205	Not used

1 2 3 4

# 2.4 CHASSIS SECTION (1/2)

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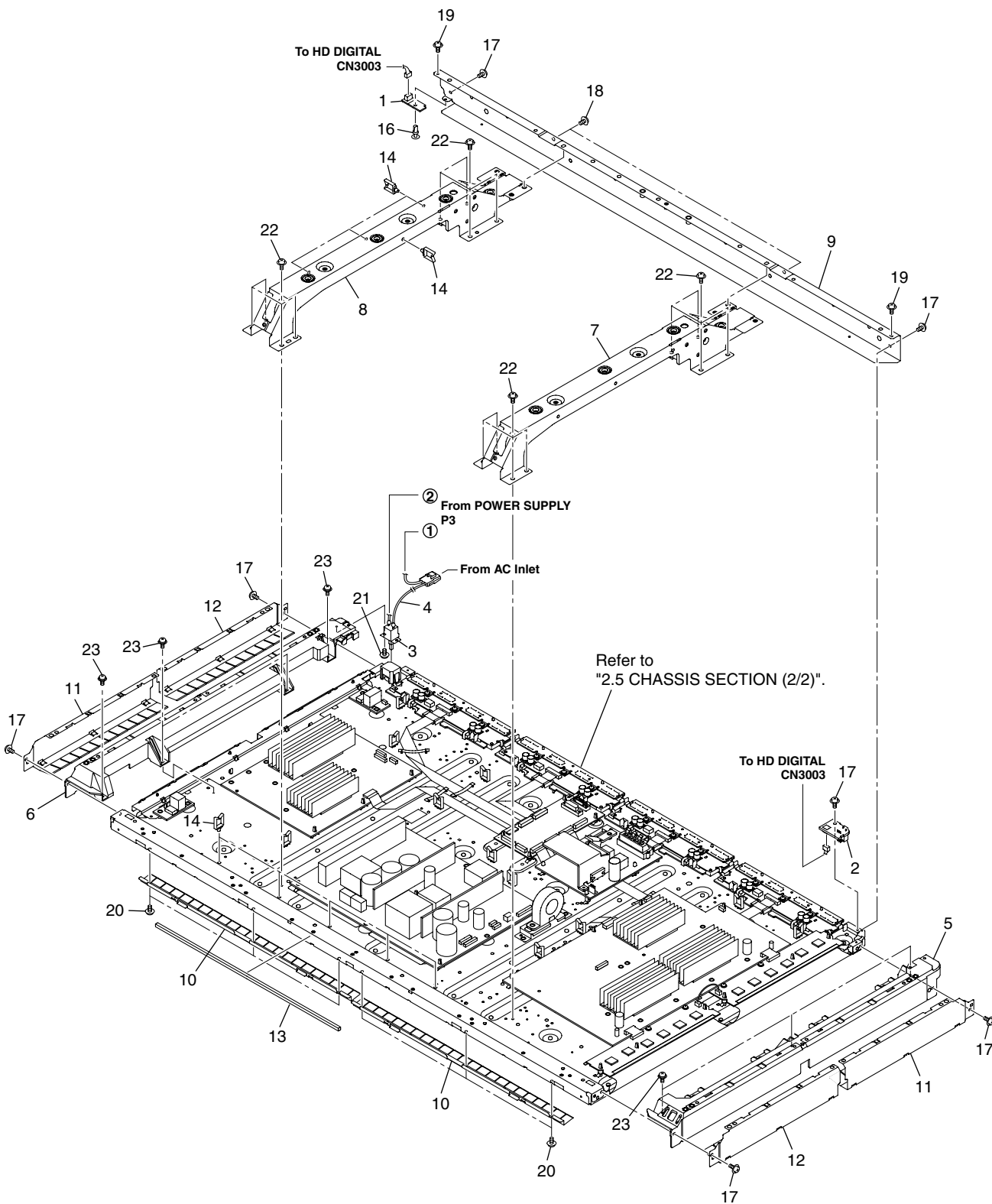
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# CHASSIS SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.	
	1	HD LED Assy	AWW1029	
	2	HD IR Assy	AWW1030	
⚠	3	Power Switch (S1)	ASG1092	A
	4	Housing Wire (43)(J103)	ADX3126	
	5	Front Chassis VL (43)	AMA1016	
	6	Front Chassis VR (43)	AMA1017	
	7	Sub Frame L Assy (436)	ANA1864	
	8	Sub Frame R Assy (436)	ANA1865	
	9	Front Chassis H Assy (43)	ANA1884	
	10	Panel Holder H (43)	ANG2772	
	11	Panel Holder V1 (43)	ANG2773	B
	12	Panel Holder V2 (43)	ANG2774	
	13	Cushion	AEB1424	
	14	Wire Saddle	AEC1745	
	15	•••••		
	16	Nyron Rivet	AEC1671	
	17	Screw	ABZ30P080FTC	
	18	Screw	AMZ30P060FTB	
	19	Screw	APZ30P080FTB	
	20	Screw	BBZ30P060FTC	
	21	Screw	BPZ30P080FTB	C
	22	Screw	TBZ40P080FTB	
	23	Screw	VBB30P080FNI	

## 4

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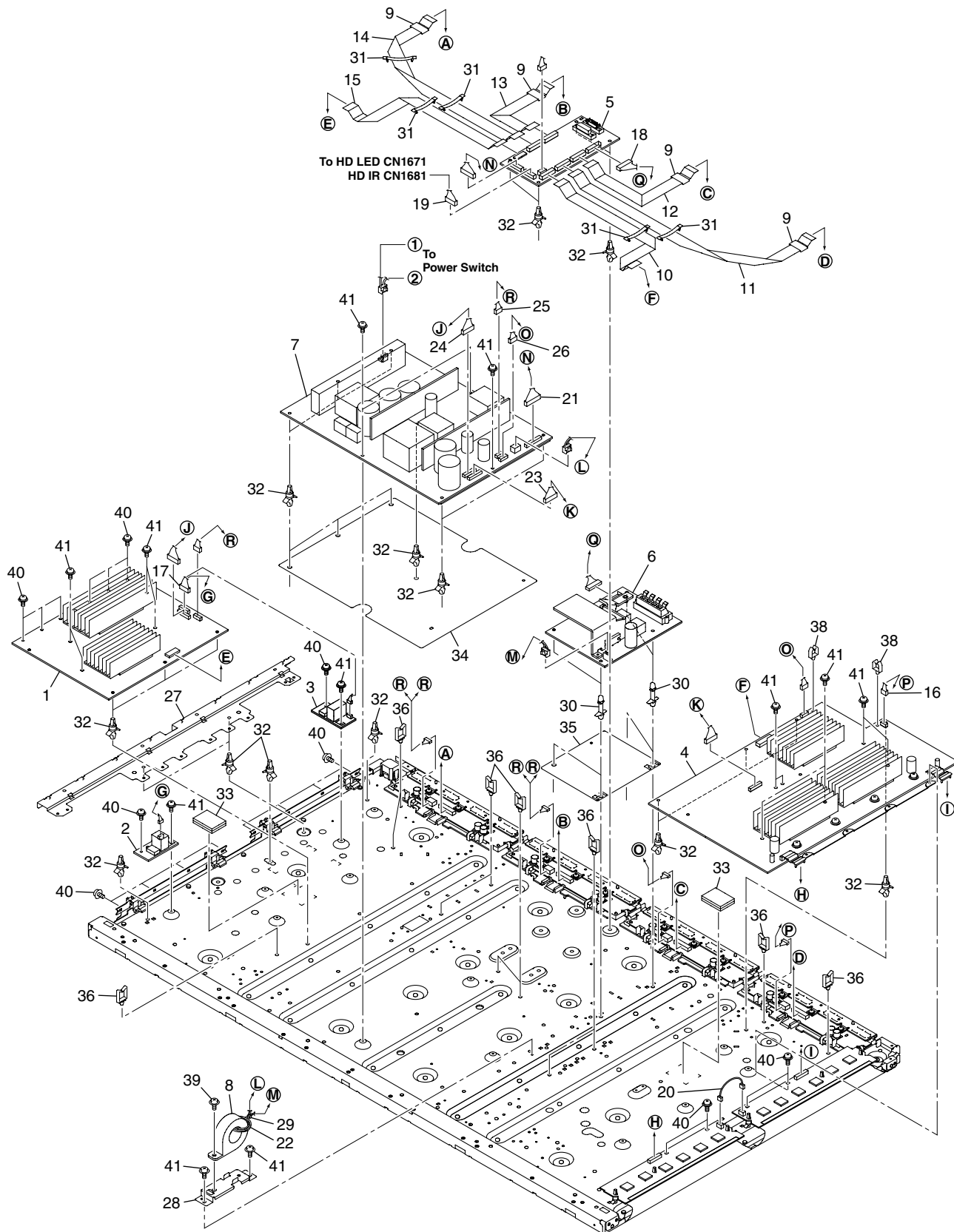
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## CHASSIS SECTION (2/2) PARTS LIST

Mark	No.	Description	Part No.	
	1	43 X DRIVE Assy	AWW1074	
	2	SUS CLAMP 1 Assy	AWW1022	A
	3	SUS CLAMP 2 Assy	AWW1023	
	4	43 Y DRIVE Assy	AWV2256	
	5	HD DIGITAL Assy	AWW1028	
	6	HD AUDIO Assy	AWV2203	
⚠	7	POWER SUPPLY Unit	AXY1112	
	8	Ring Core with Case	ATX1042	
	9	Ferrite Core	ATX1048	
	10	Flexible Cable (J201)	ADD1299	
	11	Flexible Cable (J202)	ADD1300	B
	12	Flexible Cable (J203)	ADD1301	
	13	Flexible Cable (J204)	ADD1302	
	14	Flexible Cable (J205)	ADD1303	
	15	Flexible Cable (J206)	ADD1304	
	16	4P Housing Wire (J108)	ADX3131	
	17	6P Housing Wire (J109)	ADX3132	
	18	12P Housing Wire (J110)	ADX3133	
	19	6P Housing Wire (J111)	ADX3134	
	20	3P Housing Wire (J113)	ADX3136	C
	21	14P Housing Wire (J104)	ADX3162	
	22	3P Housing Wire (J105)	ADX3128	
	23	9P Housing Wire (J101)	ADX3124	
	24	8P Housing Wire (J102)	ADX3125	
	25	5P Housing Wire (J106)	ADX3129	
	26	6P Housing Wire (J107)	ADX3130	
	27	Conductive Plate XA	ANG2776	
	28	FC Stay	ANG2815	
	29	Binder	AEC-093	D
NSP	30	PCB Spacer	AEC1188	
	31	Flat Clamp	AEC1879	
	32	PCB Spacer	AEC1941	
	33	Drive Silicone Sheet	AEH1095	
	34	Power Supply Insulation Sheet	AMR3447	
	35	Audio Insulation Sheet	AMR3469	
	36	Wire Saddle	AEC1745	
	37	•••••		
	38	Mini Clamp	AEC1971	E
	39	Screw	ABA1324	
	40	Screw	PMB30P060FTC	
	41	Screw	VBB30P080FNI	

# 1 2 3 4 2.6 PDP SERVICE ASSY 436P (AWU1135)

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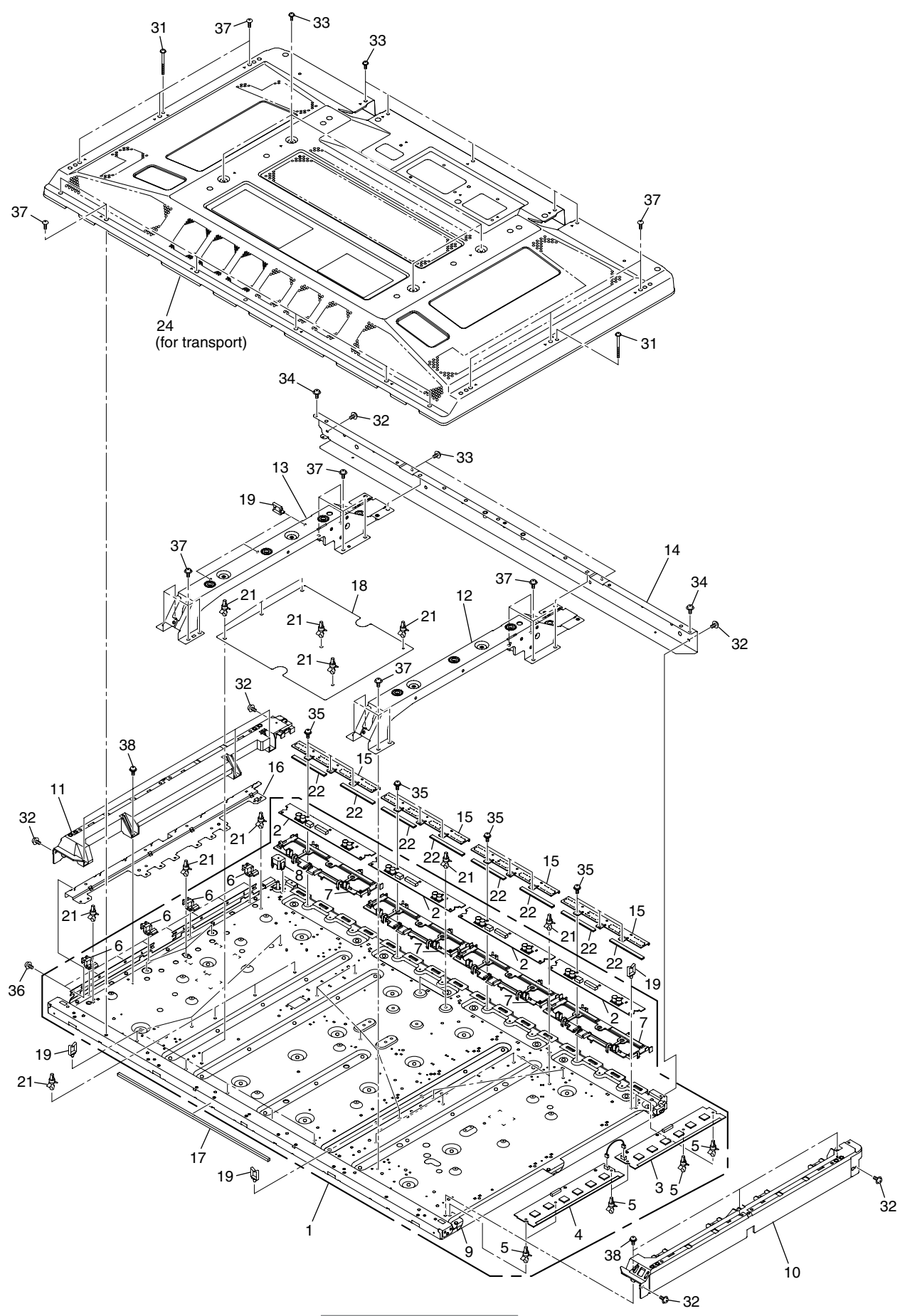
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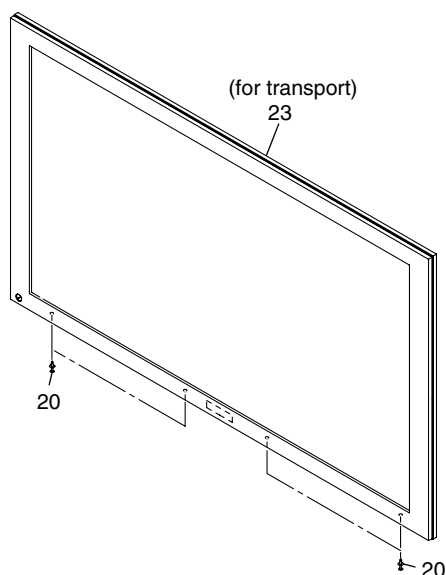
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## • Front Section



### Note when replacing with the PDP Service Assy 436P

The Power Switch (S1), HD LED Assy, and HD IR Assy are not included in the PDP Service Assy 436P. Before replacement with the PDP Service Assy 436P, the following components of the Service Assy must be temporarily detached to attach the above-mentioned parts (parts from the original unit or newly purchased):

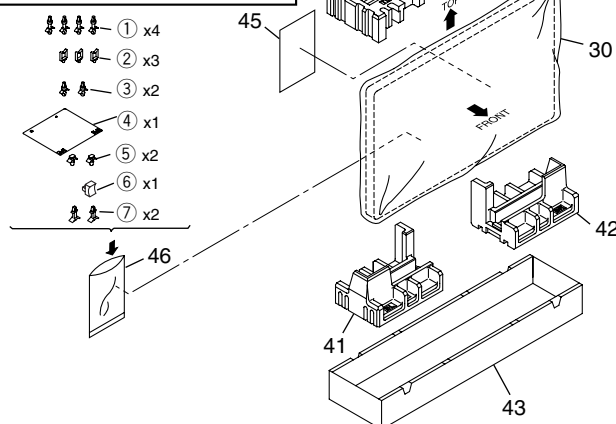
- Front Chassis H Assy (43) (ANA1884)
- Front Chassis VL (43) (AMA1016)
- Front Chassis VR (43) (AMA1017)

## • Packing Section

Some parts of the PDP Service Assy 436P are provided as supplied accessories:

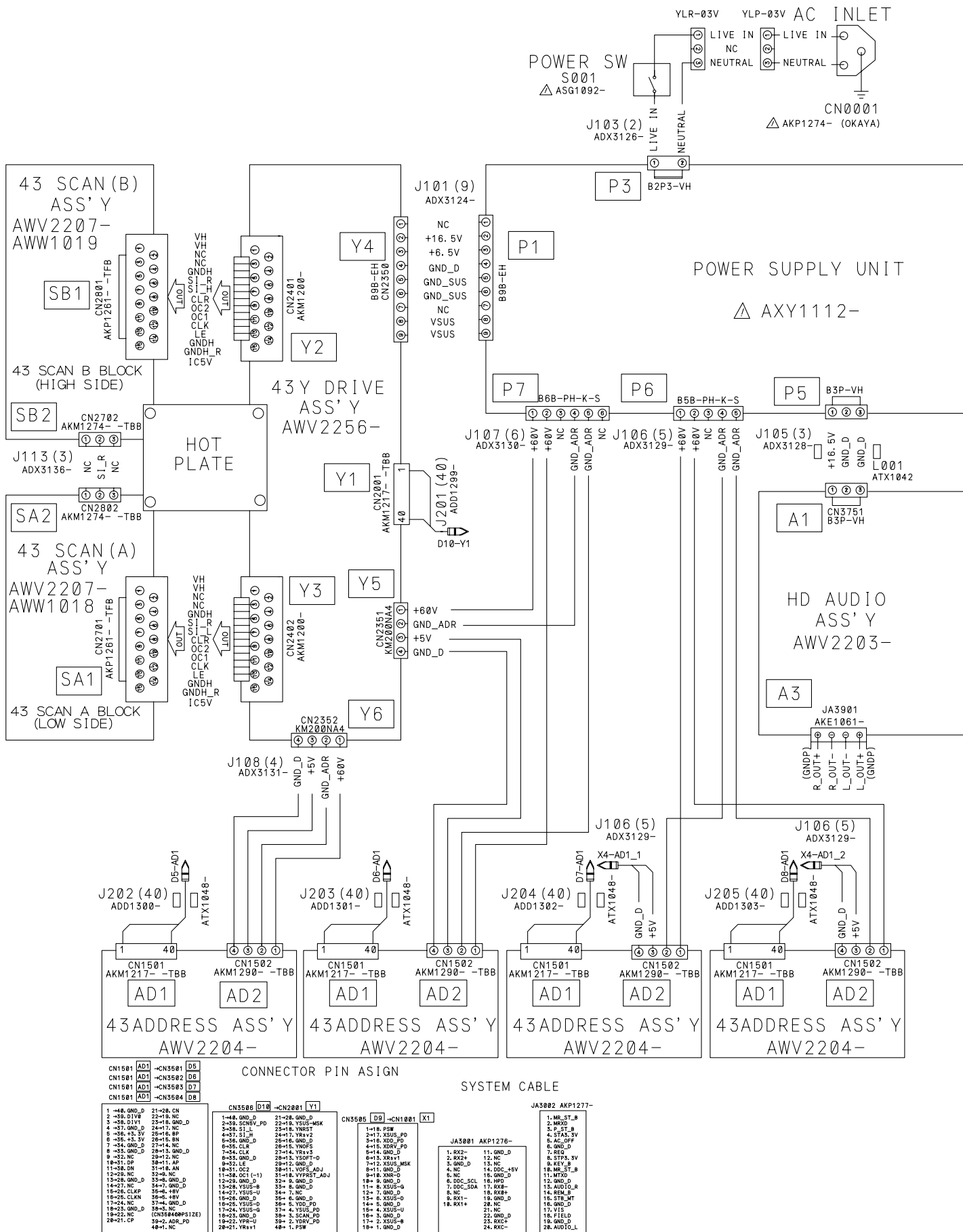
- ① PCB spacer (AEC1188) ×4
- ② Wire saddle (AEC1745) ×3 (out of 20)
- ③ PCB spacer (AEC1941) ×2 (out of 22)
- ④ Audio sheet (AMR3469)
- ⑤ PCB Support (AEC1938) ×2 (not used in this product)
- ⑥ Ferrite Core Holder (AEC1818) ×1 (not used in this product)
- ⑦ Circuit Board Spacer (AEC1872) ×2 (not used in this product)

For details on reattachment, refer to the "Instructions on Panel Replacement (6G) (ARM1287)," included in the service-part kit.

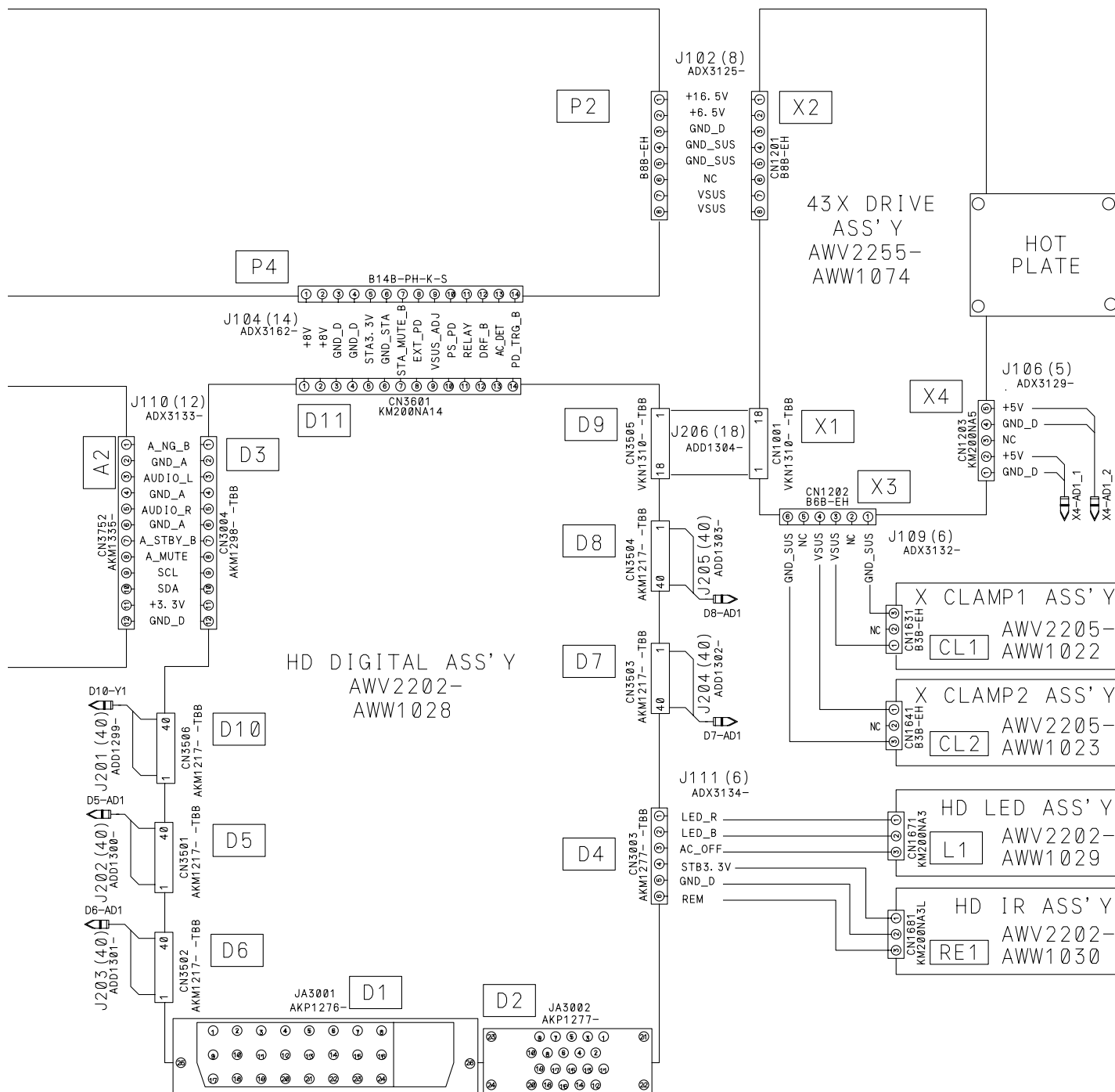


## PDP SERVICE ASSY 436P (AWU1135) PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
NSP 1	Panel Chassis (436) Assy	AWU1145	25	•••••	
NSP 2	43 ADDRESS Assy	AWV2204	26	•••••	
NSP 3	43 SCAN A Assy	AWW1018	27	•••••	
NSP 4	43 SCAN B Assy	AWW1019	28	•••••	
5	PCB Spacer	AEC1944	29	•••••	
6	Conductive Plate Holder	AMR3446	30	Protect Sheet	AHG1331
7	Address Holder Assy (436)	AMR3455	31	Screw (3x40P)	ABA1332
8	Tube Cover	AMR3445	32	Screw	ABZ30P080FTC
NSP 9	Chassis Assy (436)	ANA1833	33	Screw	AMZ30P060FTB
10	Front Chassis VL (43)	AMA1016	34	Screw	APZ30P080FTB
11	Front Chassis VR (43)	AMA1017	35	Screw	BBB30P120FNI
12	Sub Frame L Assy (436)	ANA1864	36	Screw	PMB30P060FTC
13	Sub Frame R Assy (436)	ANA1865	37	Screw	TBZ40P080FTB
14	Front Chassis H Assy (43)	ANA1884	38	Screw	VBB30P080FNI
15	Address Heatsink (436)	ANH1641	39	Pad (43T-L)	AHA2431
16	Conductive Plate XA	ANG2776	40	Pad (43T-R)	AHA2432
17	Cushion	AEB1424	41	Pad (43B-L)	AHA2433
18	Power Supply Insulation Sheet	AMR3447	42	Pad (43B-R)	AHA2434
19	Wire Saddle	AEC1745	43	Under Carton	AHD3346
20	Screw Rivet	AEC1877	NSP 44	Upper Carton	AHD3436
21	PCB Spacer	AEC1941	NSP 45	Exchange Panel Sheet	ARM1287
22	Address Silicone A	AEH1093	46	Vinyl Bag S	AHG1338
23	Front Case Assy 436 service	AMB2895			
	(for transportation: please do not use for repair)				
24	Rear Case (436)	ANE1640			
	(for transportation: please do not use for repair)				



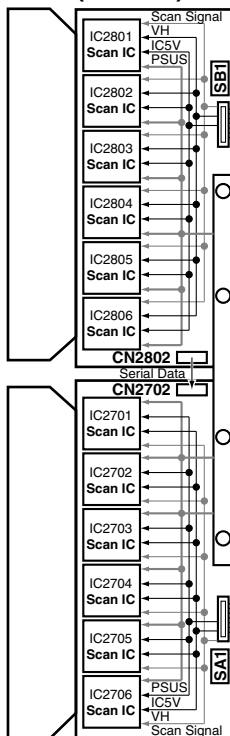
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



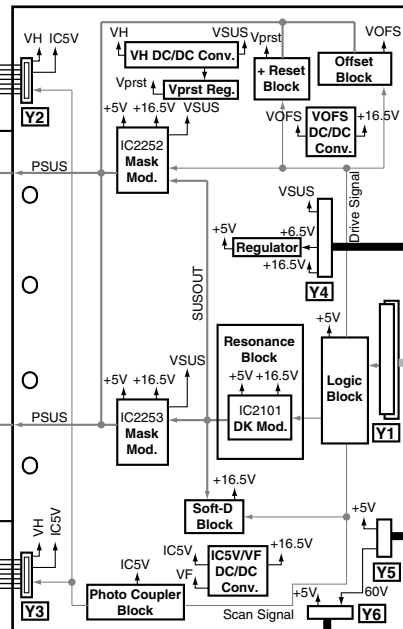
## 3.2 OVERALL BLOCK DIAGRAM

A

### 43 SCAN B ASSY (UPPER)



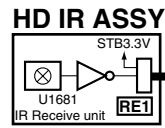
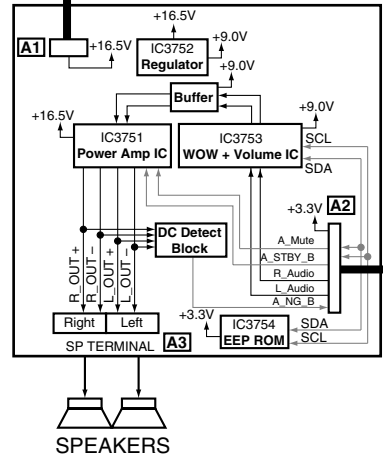
### 43 Y DRIVE ASSY



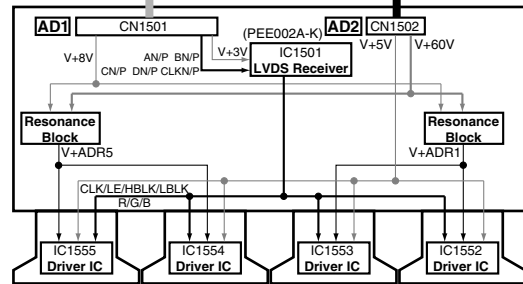
### 43 SCAN A ASSY (LOWER)



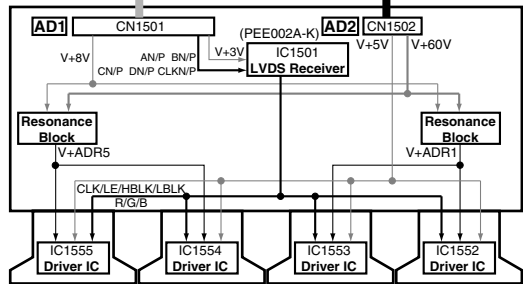
### HD AUDIO ASSY

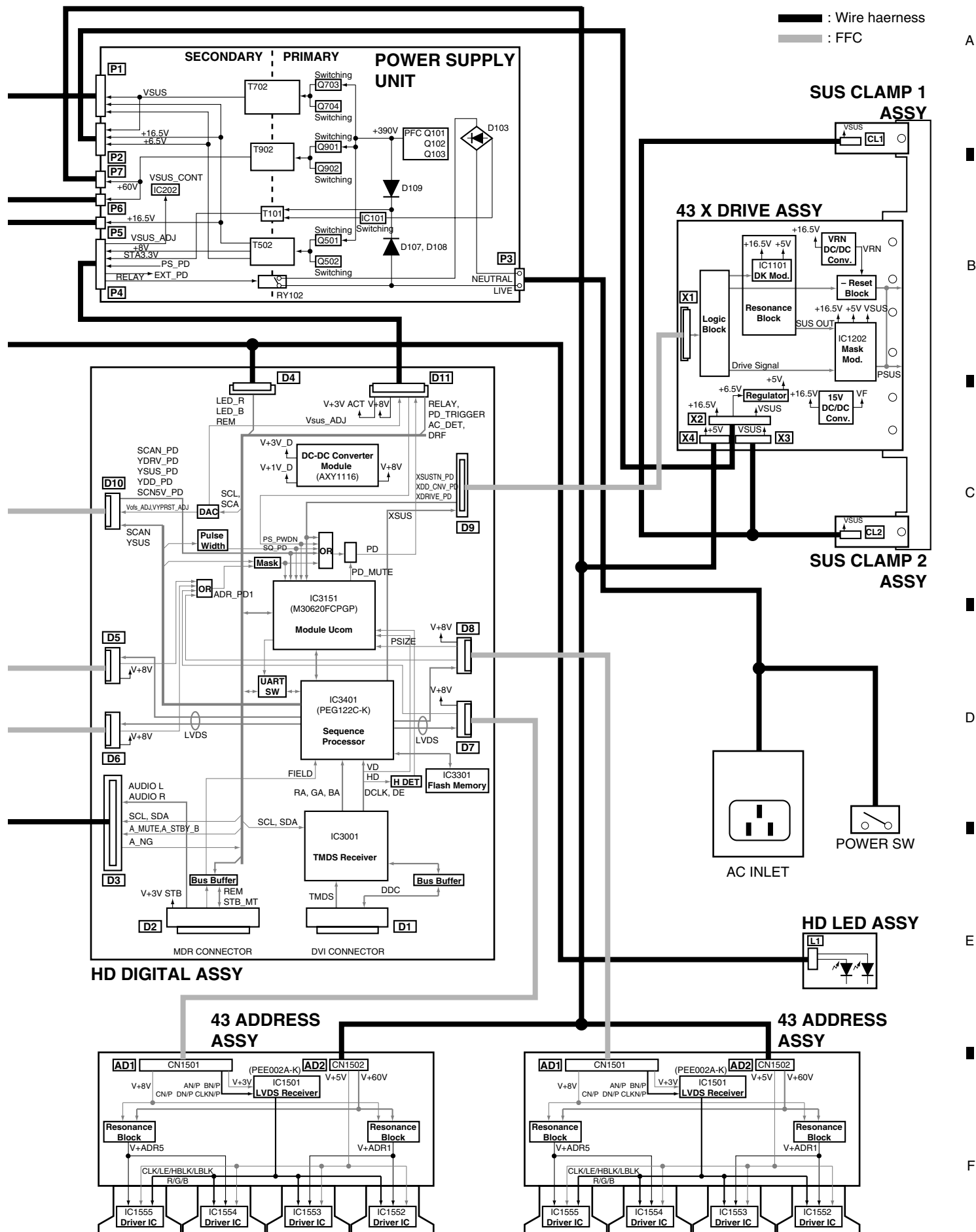


### 43 ADDRESS ASSY



### 43 ADDRESS ASSY





1 2 3 4

### 3.3 43 ADDRESS ASSY

A

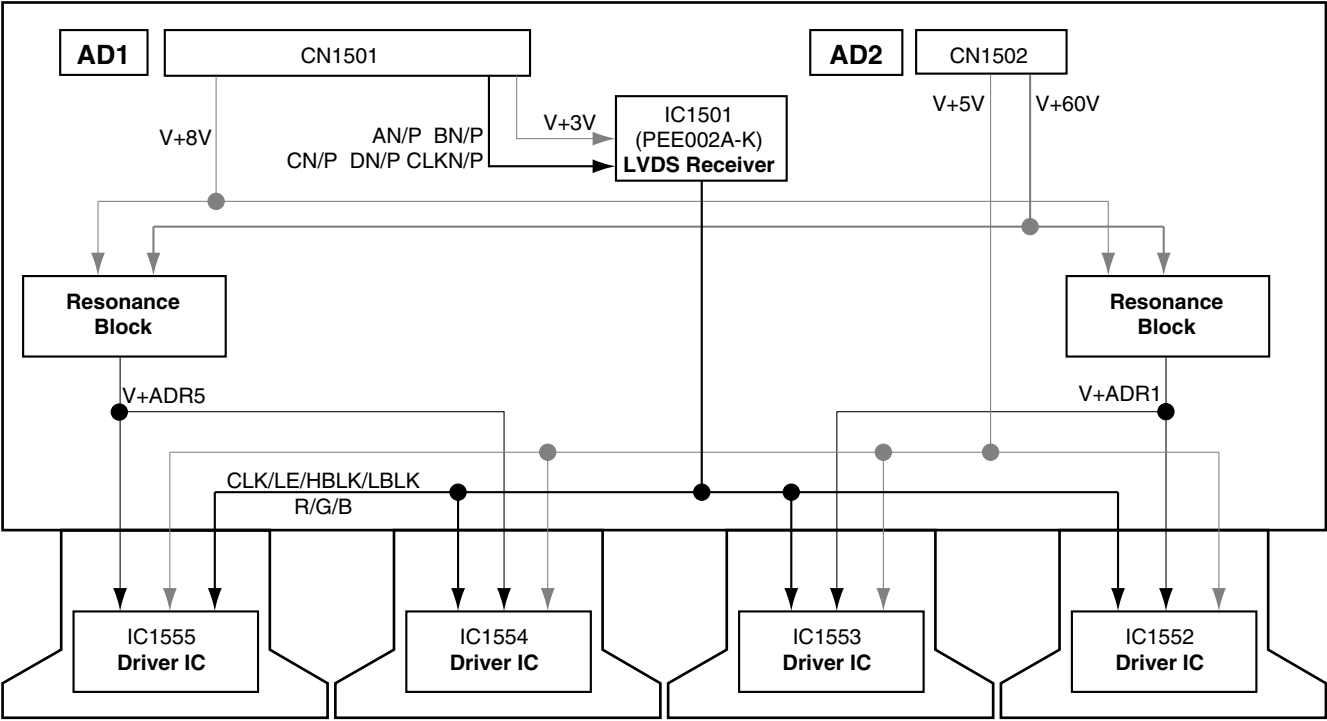
B

C

D

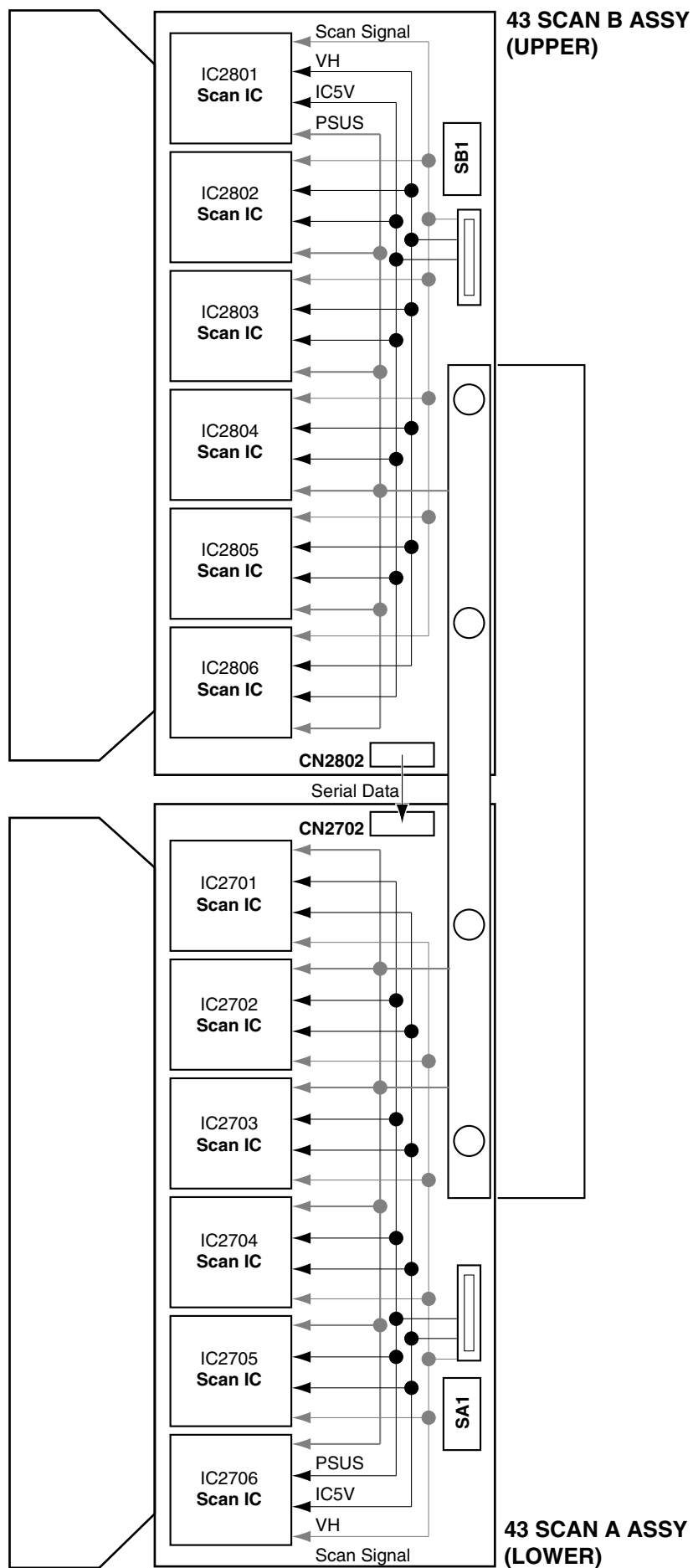
E

F

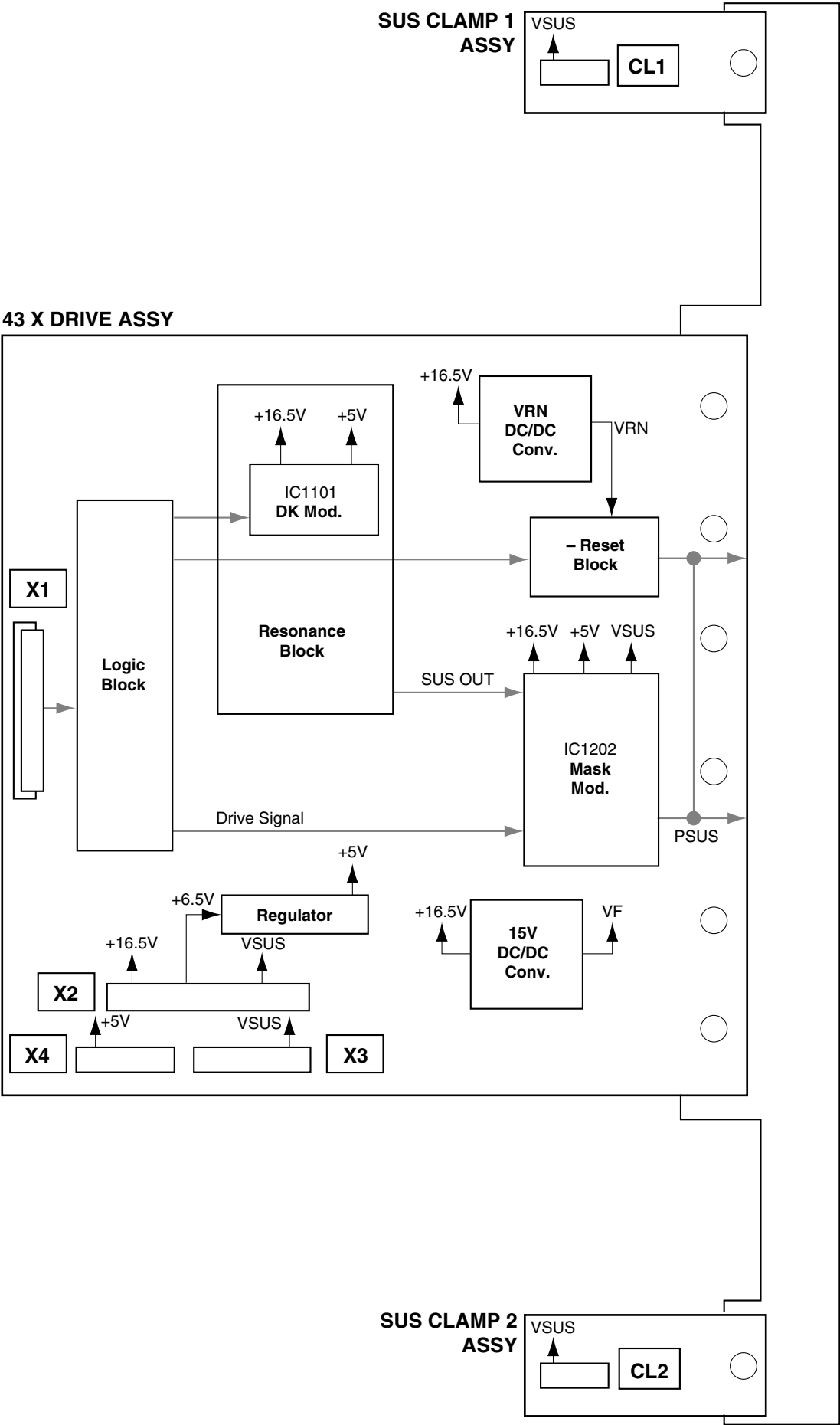




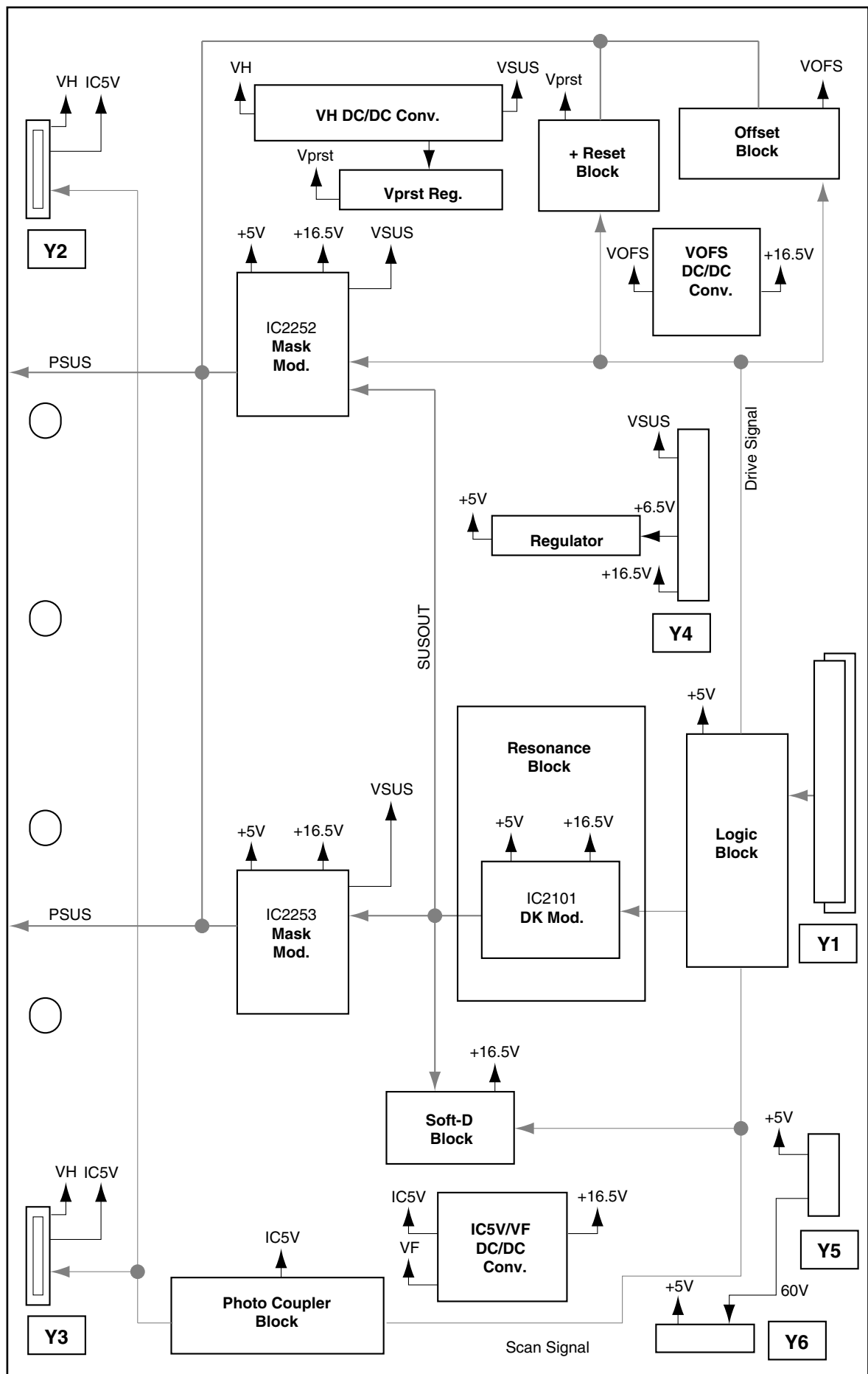
### 3.4 43 SCAN A and B ASSYS



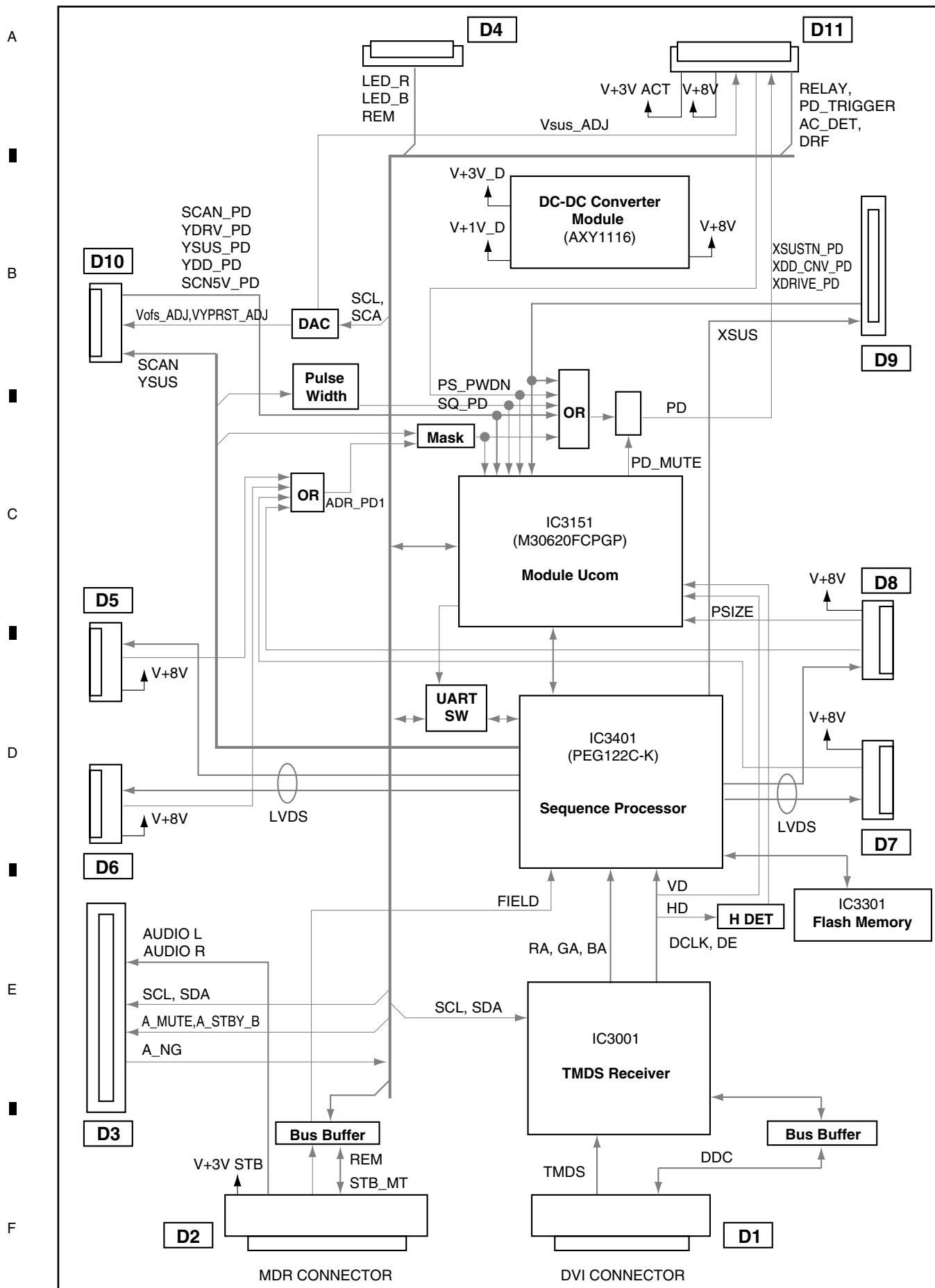
3.5 43 X DRIVE, SUS CLAMP 1 and SUS CLAMP 2 ASSYS



### 3.6 43 Y DRIVE ASSY



### 3.7 HD DIGITAL ASSY





3.9 POWER SUPPLY UNIT

A

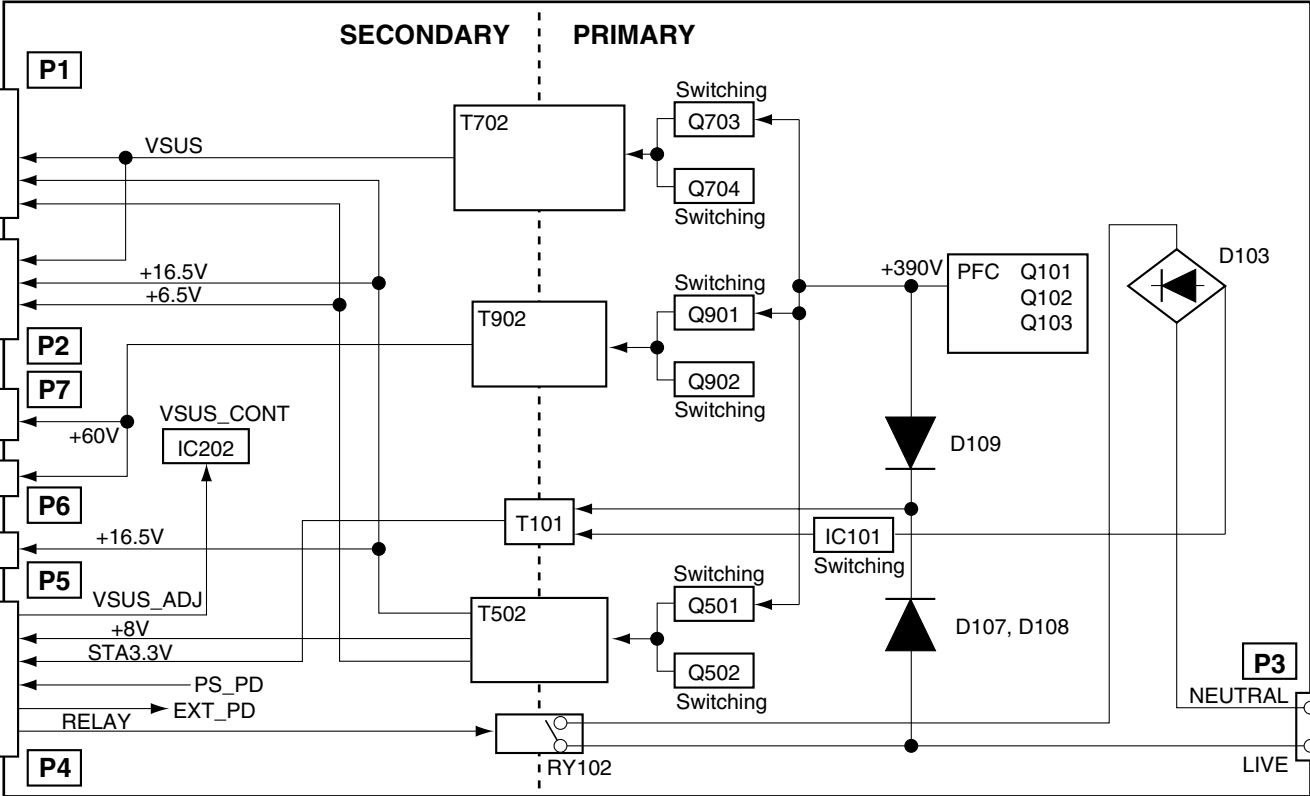
B

C

D

E

F



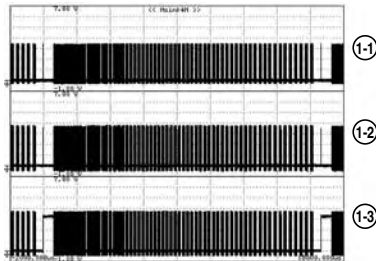
## 3.10 WAVEFORMS

Note : The encircled numbers denote measuring point in the schematic diagram.  
Refer to service manual (ARP3272).

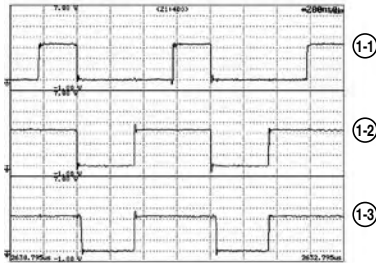
### 43 ADDRESS ASSY

#### 43 ADDRESS RESONANCE BLOCK

- ① Control signal of resonance circuit (1 field)  
Input : VIDEO 60Hz  
Signal : Color-bar (MKSS17)  
①-1 CH1 : ADDR\_B2  
V : 1V/div H : 2msec/div  
①-2 CH2 : ADDR\_U2  
V : 1V/div H : 2msec/div  
①-3 CH3 : ADDR\_D2  
V : 1V/div H : 2msec/div

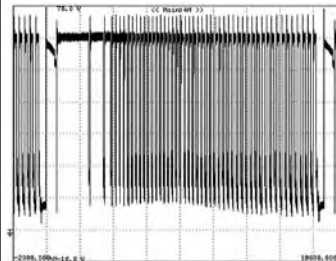


- ① Control signal of resonance circuit (2 FS)  
Input : VIDEO 60Hz  
Signal : Color-bar (MKSS17)  
①-1 CH1 : ADDR\_B2  
V : 1V/div H : 2msec/div  
①-2 CH2 : ADDR\_U2  
V : 1V/div H : 2msec/div  
①-3 CH3 : ADDR\_D2  
V : 1V/div H : 2msec/div

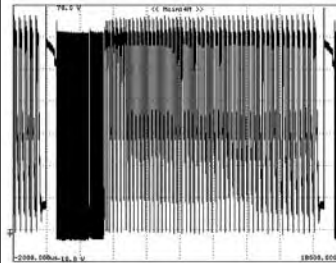


#### 43 ADDRESS LOGIC BLOCK

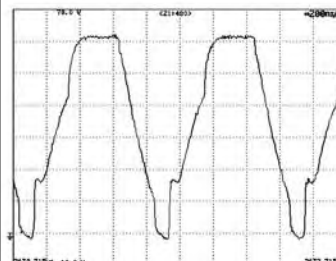
- ② VADR (1 field)  
Input : VIDEO 60Hz  
Signal : Color-bar (MKSS17)  
CH2 : IC1555-pin 3 (VDD2)  
V : 10V/div H : 2msec/div



- ② VADR (1 field)  
Input : VIDEO 60Hz  
Signal : Checkered pattern of Black-White (MKSS13)  
CH2 : IC1555-pin 3 (VDD2)  
V : 10V/div H : 2msec/div

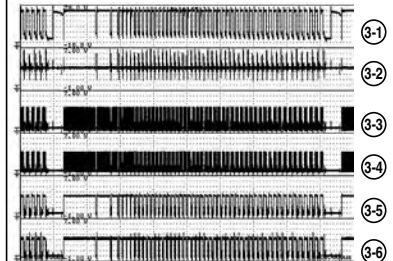


- ② VADR (2 FS)  
Input : VIDEO 60Hz  
Signal : Checkered pattern of Black-White (MKSS13)  
CH2 : IC1555-pin 3 (VDD2)  
V : 10V/div H : 200nsec/div

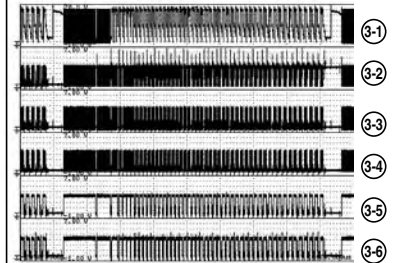


#### TCP LOGIC

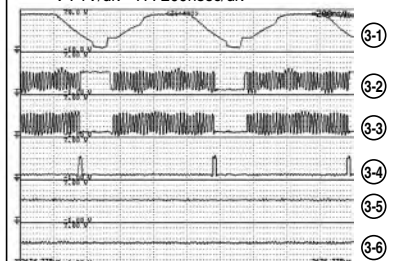
- ③ Incoming signal of TCP (1 field)  
Input : VIDEO 60Hz  
Signal : Color-bar (MKSS17)  
③-1 CH1 : IC1555-pin 3 (VDD2)  
V : 10V/div H : 2msec/div  
③-2 CH2 : IC1555-pin 9 (A3)  
V : 1V/div H : 2msec/div  
③-3 CH3 : IC1555-pin 16 (CLK)  
V : 1V/div H : 2msec/div  
③-4 CH4 : IC1555-pin 14 (LE)  
V : 1V/div H : 2msec/div  
③-5 CH5 : IC1555-pin 19 (HBLK)  
V : 1V/div H : 2msec/div  
③-6 CH6 : IC1555-pin 17 (LBLK)  
V : 1V/div H : 2msec/div



- ③ Incoming signal of TCP (1 field)  
Input : VIDEO 60Hz  
Signal : Checkered pattern of Black-White (MKSS13)  
③-1 CH1 : IC1555-pin 3 (VDD2)  
V : 10V/div H : 2msec/div  
③-2 CH2 : IC1555-pin 9 (A3)  
V : 1V/div H : 2msec/div  
③-3 CH3 : IC1555-pin 16 (CLK)  
V : 1V/div H : 2msec/div  
③-4 CH4 : IC1555-pin 14 (LE)  
V : 1V/div H : 2msec/div  
③-5 CH5 : IC1555-pin 19 (HBLK)  
V : 1V/div H : 2msec/div  
③-6 CH6 : IC1555-pin 17 (LBLK)  
V : 1V/div H : 2msec/div



- ③ Incoming signal of TCP (Resonance part)  
Input : VIDEO  
Signal : Checkered pattern of Black-White (MKSS13)  
③-1 CH1 : IC1555-pin 3 (VDD2)  
V : 10V/div H : 200nsec/div  
③-2 CH2 : IC1555-pin 9 (A3)  
V : 1V/div H : 200nsec/div  
③-3 CH3 : IC1555-pin 16 (CLK)  
V : 1V/div H : 200nsec/div  
③-4 CH4 : IC1555-pin 14 (LE)  
V : 1V/div H : 200nsec/div  
③-5 CH5 : IC1555-pin 19 (HBLK)  
V : 1V/div H : 200nsec/div  
③-6 CH6 : IC1555-pin 17 (LBLK)  
V : 1V/div H : 200nsec/div



A

## 43 X DRIVE, 43 Y DRIVE ASSY

B

C

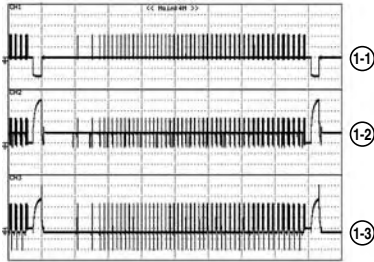
D

E

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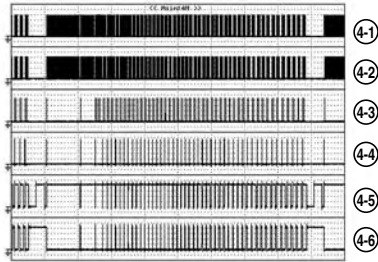
## ① Drive output signal (1 field, Color-bar)

- ①-1 CH1 : R1277 (XPSUS) - K1203 (SUSGND)  
V : 100V/div H : 2msec/div (X DRIVE Assy)
- ①-2 CH2 : K2701 (SCANOUT) - K2330 (SUSGND)  
V : 100V/div H : 2msec/div (SCAN A Assy)
- ①-3 CH3 : F2301 (YPSUS) - K2330 (SUSGND)  
V : 100V/div H : 2msec/div (Y DRIVE Assy)



## ④ Scan control signal (1 field, Color-bar)

- ④-1 CH1 : TP2001 (LE) - K2002 (GND-D)  
V : 1V/div H : 2msec/div (X DRIVE Assy)
- ④-2 CH2 : TP2008 (CLK) - K2002 (GND-D)  
V : 1V/div H : 2msec/div (X DRIVE Assy)
- ④-3 CH3 : TP2003 (SI-H) - K2002 (GND-D)  
V : 1V/div H : 2msec/div (X DRIVE Assy)
- ④-4 CH4 : TP2004 (CLR) - K2002 (GND-D)  
V : 1V/div H : 2msec/div (X DRIVE Assy)
- ④-5 CH5 : TP2005 (OC2) - K2002 (GND-D)  
V : 1V/div H : 2msec/div (X DRIVE Assy)
- ④-6 CH6 : TP2006 (OC1) - K2002 (GND-D)  
V : 1V/div H : 2msec/div (X DRIVE Assy)



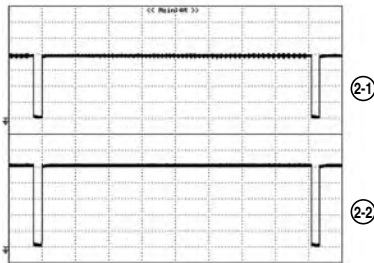
## ⑦ Sustain signal

- ⑦-1 CH1 : F2301 (YPSUS) - K2330 (SUSGND)  
V : 50V/div H : 500nsec/div (Y DRIVE Assy)
- ⑦-2 CH2 : K2004 (YSUS-G) - K2002 (DGND)  
V : 5V/div H : 500nsec/div (Y DRIVE Assy)
- ⑦-3 CH3 : K2011 (YSUS-U) - K2002 (DGND)  
V : 5V/div H : 500nsec/div (Y DRIVE Assy)
- ⑦-4 CH4 : K2009 (YSUS-B) - K2002 (DGND)  
V : 5V/div H : 500nsec/div (Y DRIVE Assy)
- ⑦-5 CH5 : K2010 (YSUS-D) - K2002 (DGND)  
V : 5V/div H : 500nsec/div (Y DRIVE Assy)



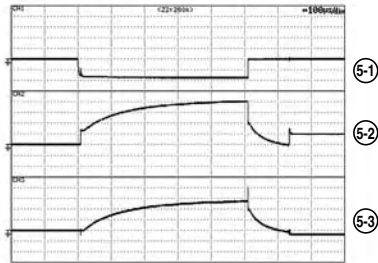
## ② X Drive pulse control signal (Color-bar)

- ②-1 CH1 : K1009 (XSUS-MSK) - K1001 (DGND)  
V : 1V/div H : 2msec/div (X DRIVE Assy)
- ②-2 CH2 : K1005 (XNR-D) - K1001 (DGND)  
V : 1V/div H : 2msec/div (X DRIVE Assy)



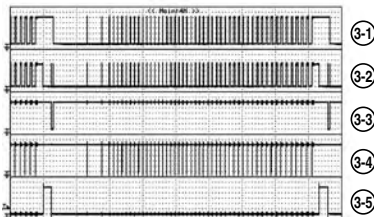
## ⑤ Reset pulse signal

- ⑤-1 CH1 : R1277 (XPSUS) - K1203 (SUSGND)  
V : 100V/div H : 100µsec/div (X DRIVE Assy)
- ⑤-2 CH2 : K2701 (SCANOUT) - K2330 (SUSGND)  
V : 100V/div H : 100µsec/div (SCAN A Assy)
- ⑤-3 CH3 : F2301 (YPSUS) - K2330 (SUSGND)  
V : 100V/div H : 100µsec/div (Y DRIVE Assy)



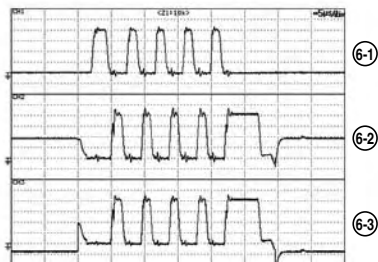
## ③ Y Drive pulse control signal (Color-bar)

- ③-1 CH1 : K2007 (YNOFS) - K2002 (GND\_D)  
V : 1V/div H : 2msec/div (Y DRIVE Assy)
- ③-2 CH2 : K2005 (YSUS-MSK) - K2002 (GND\_D)  
V : 1V/div H : 2msec/div (Y DRIVE Assy)
- ③-3 CH3 : K2008 (YNRST) - K2002 (GND\_D)  
V : 1V/div H : 2msec/div (Y DRIVE Assy)
- ③-4 CH4 : K2006 (SOFT-D) - K2002 (GND\_D)  
V : 1V/div H : 2msec/div (Y DRIVE Assy)
- ③-5 CH5 : K2023 (YPR-U) - K2002 (GND\_D)  
V : 1V/div H : 2msec/div (Y DRIVE Assy)



## ⑥ Sustain pulse signal (1 sub, sub field)

- ⑥-1 CH1 : R1277 (XPSUS) - K1203 (SUSGND)  
V : 50V/div H : 5µsec/div (X DRIVE Assy)
- ⑥-2 CH2 : K2701 (SCANOUT) - K2330 (SUSGND)  
V : 50V/div H : 5µsec/div (SCAN A Assy)
- ⑥-3 CH3 : F2301 (YPSUS) - K2330 (SUSGND)  
V : 50V/div H : 5µsec/div (Y DRIVE Assy)





# 5. PCB PARTS LIST

NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

●The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

●When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10<sup>1</sup> → 561 ..... RD1/4PU 561J

47k Ω → 47 × 10<sup>3</sup> → 473 ..... RD1/4PU 473J

0.5 Ω → R50 ..... RN2H R50K

1 Ω → 1R0 ..... RS1P 1R0K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10<sup>1</sup> → 5621 ..... RN1/4PC 5621F

## MarkNo. Description Part No. LIST OF ASSEMBLIES

NSP	1..PANEL CHASSIS (436) ASSY	AWU1145
NSP	2..43 ADDRESS ASSY	AWV2204
NSP	2..43 SCAN ASSY	AWV2207
NSP	3..43 SCAN A ASSY	AWW1018
NSP	3..43 SCAN B ASSY	AWW1019
NSP	1..43 X DRIVE ASSY	AWV2255
	2..43 X DRIVE ASSY	AWW1074
	2..SUS CLAMP 1 ASSY	AWW1022
	2..SUS CLAMP 2 ASSY	AWW1023
	1..43 Y DRIVE ASSY	AWV2256
NSP	1..HD DIGITAL ASSY	AWV2202
	2..HD DIGITAL ASSY	AWW1028
	2..HD LED ASSY	AWW1029
	2..HD IR ASSY	AWW1030
	1..HD AUDIO ASSY	AWV2203
⚠	1..POWER SUPPLY UNIT	AXY1112

## Mark No. Description Part No. 43 ADDRESS ASSY [43 ADR LOGIC BLOCK] SEMICONDUCTORS

IC1501 PEE002A

### COILS AND FILTERS

L1504 CHIP SOLIDD INDUCTOR QTL1013

### CAPACITORS

C1501,C1502 CKSRYB105K6R3  
C1509,C1510 CKSSYB102K50  
C1503-C1507,C1552-C1555 CKSSYF104Z16

### RESISTORS

R1505-R1509 RS1/16SS1000F  
R1530,R1531 RS1/16S0R0J  
Other Resistors RS1/16SS###J

### OTHERS

CN1501 40P CONNECTOR AKM1217  
CN1502 PH CONNECTOR 4P AKM1290

## Mark No. Description Part No. [43 ADR RESONANCE BLOCK] SEMICONDUCTORS

IC1601,IC1602 TND307TD  
Q1612 2SA1163  
Q1607,Q1609 HAT1110R  
Q1601,Q1610 HAT3021R  
Q1606,Q1608,Q1611 QSZ2

Q1615 RN1901  
D1612 1SS302  
D1625,D1628 1SS355  
D1602,D1603,D1605,D1606 EC10UA20  
D1607-D1610 EP05FA20

D1601,D1611,D1620,D1622 UDZS15(B)

### COILS AND FILTERS

L1601,L1604 INDUCTOR ATH1135

### CAPACITORS

C1609 (0.1U/100V) ACG1098  
C1620,C1621 (330P/100V) ACG1105  
C1601,C1614 (0.1U/100V) ACG1124  
C1602,C1604 (56U/80V) ACH1422  
C1613 CKSRYB104K25

C1619 CKSYB105K16

### RESISTORS

R1601,R1617 RS1/16S4702F  
Other Resistors RS1/16S###J  
Other Resistors RS1/16SS###J

## 43 SCAN A ASSY SEMICONDUCTORS

IC2701-IC2706 SN755870PZT  
IC2707 TC7SH08FUS1  
D2701-D2705 1SS355

### CAPACITORS

C2701,C2711,C2721 (0.1U/250V) ACG1088  
C2731,C2741,C2751 (0.1U/250V) ACG1088  
C2710,C2720,C2730,C2740,C2750 CCSRCH181J50  
C2760 CCSRCH181J50  
C2708,C2709,C2718,C2719 CCSRCH331J50

C2728,C2729,C2738,C2739 CCSRCH331J50  
C2748,C2749,C2758,C2759 CCSRCH331J50  
C2705-C2707,C2715-C2717 CCSRCH390J50  
C2725-C2727,C2735-C2737 CCSRCH390J50  
C2745-C2747,C2755-C2757 CCSRCH390J50

Mark No.	Description	Part No.
C2703,C2713,C2723,C2733,C2743 C2753,C2761		CKSRYB105K6R3 CKSRYB105K6R3

Mark No.	Description	Part No.
<b>OTHERS</b>		
CN1001	18P FFC CONNECTOR	VKN1310

A	<b>RESISTORS</b>	
	R2705,R2710,R2713,R2716,R2719 R2722	RAB4C221J RAB4C221J
	Other Resistors	RS1/16S###J

### [X RESONANCE BLOCK] SEMICONDUCTORS

IC1101	AXF1145
IC1141	BA10393F
Q1141	2SC4116
D1101-D1105	D1FL40

### COILS AND FILTERS

L1101,L1102	CHOKO COIL	ATH1155
L1103-L1106	CHOKO COIL	ATH1193

### CAPACITORS

C1106-C1110	ACE1178
C1101,C1112,C1113 (0.22U/250V)	ACG1112
C1121 (470P/630V)	ACG1126
C1167,C1168 (3300P/630V)	ACG1129
C1105	CCG1186
C1141,C1142,C1144,C1145	CKSRYB104K16
C1102,C1146	CKSRYB105K6R3
C1103	CKSYB105K25

### RESISTORS

R1101	ACN1168
R1142,R1146	RS1/10S1003F
R1122,R1123	RS1/10S104J
R1148,R1150	RS1/16S5601F
R1151,R1155	RS1/16S6801F

R1106,R1121	RS2MMF100J
Other Resistors	RS1/16S###J

### [X SUS BLOCK] SEMICONDUCTORS

IC1202	AXF1143
IC1201	MM1565AF
IC1252	PS9117
IC1251	TND301S
IC1271	TND307TD

Q1251	2SC2412K
Q1272	2SK3325-Z
D1281	1SS302
D1201	1SS355
D1252	CRH01

D1282	UDZS16(B)
D1251	UDZS5R6(B)

### COILS AND FILTERS

L1204,L1211	INDUCTOR	ATH1186
F1201	INDUCTOR	CTF1449
L1201,L1205,L1231		LFEA100J

### CAPACITORS

C1214-C1217	ACE1178
C1297,C1298 (3300P/630V)	ACG1129
C1212,C1213	ACH1424
C1231	CEHAT101M10
C1206	CEHAT101M25

## 43 SCAN B ASSY

B	<b>SEMICONDUCTORS</b>	
	IC2801-IC2806	SN755870PZT
	IC2807	TC7SH08FUS1
	D2801-D2805	1SS355

### CAPACITORS

C2801,C2811,C2821 (0.1U/250V)	ACG1088
C2831,C2841,C2851 (0.1U/250V)	ACG1088
C2810,C2820,C2830,C2840,C2850	CCSRCH181J50
C2860	CCSRCH181J50
C2808,C2809,C2818,C2819	CCSRCH331J50

C	C2828,C2829,C2838,C2839	CCSRCH331J50
	C2848,C2849,C2858,C2859	CCSRCH331J50
	C2805-C2807,C2815-C2817	CCSRCH390J50
	C2825-C2827,C2835-C2837	CCSRCH390J50
	C2845-C2847,C2855-C2857	CCSRCH390J50

C	C2803,C2813,C2823,C2833,C2843	CKSRYB105K6R3
	C2853,C2861	CKSRYB105K6R3

### RESISTORS

R2803,R2808,R2811,R2814,R2817	RAB4C221J
R2820	RAB4C221J
Other Resistors	RS1/16S###J

### OTHERS

CN2802	PH CONNECTOR 3P	AKM1274
CN2801	13P BRIDGE CONNECTOR	AKP1261

## 43 X DRIVE ASSY

### OTHERS

1002	DRIVE RADIATION SHEET	AEH1092
1001	DRIVE HEATSINK X	ANH1637
1002	DRIVE HEATSINK K	ANH1639
1001	SCREW	BMZ30P080FTC

### [X LOGIC BLOCK] SEMICONDUCTORS

IC1001	TC74ACT541FT
IC1002	TC74VHC00FTS1

### CAPACITORS

C1003	CEHAT470M16
C1001,C1002	CKSRYB104K16

### RESISTORS

R1001,R1003	RAB4C470J
R1008,R1009	RAB4C472J
Other Resistors	RS1/16S###J

5			6			7			8		
Mark No.	Description	Part No.	Mark No.	Description	Part No.	Mark No.	Description	Part No.	Mark No.	Description	Part No.
C1283		CEHAT2R2M2E		<b>SUS CLAMP 2 ASSY</b>							
C1208		CEHAT470M16		<b>SEMICONDUCTORS</b>							
C1222,C1272		CEHAT470M25		D1641	DF20L60U						A
C1221		CKSRYB105K6R3									
C1204,C1207,C1223,C1251,C1253		CKSRYF104Z50		<b>CAPACITORS</b>							
				C1642	ACE1179						
C1273		CKSRYF104Z50		<b>OTHERS</b>							
C1220		CKSYB105K25		KN1642 GROUND PLATE	ANK-142						
				CN1641 3P TOP POST	B3B-EH						
				KN1641 WRAPPING TERMINAL	VNF1084						
<b>RESISTORS</b>											
R1204		ACN1166									
R1213		ACN1168									
R1276,R1277		RS3LMF470J									
Other Resistors		RS1/16S###J									
<b>OTHERS</b>											
KN1201-KN1206 GROUND PLATE		ANK-142		<b>43 Y DRIVE ASSY</b>							
KN1208-KN1211 GROUND PLATE		ANK-142		<b>OTHERS</b>							B
CN1202 6P TOP POST		B6B-EH		2001 DRIVE RADIATION SHEET	AEH1092						
CN1201 8P TOP POST		B8B-EH		2001 CONDUCTIVE PLATE Y	ANG2832						
				2001 DRIVE HEATSINK Y	ANH1638						
				2002 DRIVE HEATSINK K	ANH1639						
				2002 SCREW	BMZ30P080FTC						
				2001 SCREW	PMB30P060FTC						
<b>[X D-D CON BLOCK]</b>											
<b>SEMICONDUCTORS</b>				<b>[Y LOGIC BLOCK]</b>							
IC1321		PS2701A-1(L)		<b>SEMICONDUCTORS</b>							
IC1326		TA76431FR		IC2002	TC74ACT540FT						C
Q1324		2SA1037K		IC2001,IC2004	TC74ACT541FT						
Q1302		2SC4081		IC2003,IC2005	TC74VHC08FTS1						
Q1301,Q1323		2SD1898									
Q1321,Q1325,Q1351		HN1C01FU									
D1303,D1324		1SS301									
D1304,D1307,D1325,D1328		1SS355									
D1301,D1302,D1326,D1327		CRH01									
D1321		D1FK60		<b>CAPACITORS</b>							
				C2003	CEHAT470M16						
D1329,D1330		UDZS4R7(B)		C2001,C2002,C2004-C2006	CKSSYB104K10						
D1306,D1323,D1331		UDZS5R1(B)									
<b>COILS AND FILTERS</b>				<b>RESISTORS</b>							
⚠ T1301 SWITCHING TRANS.		ATK1159		R2003,R2006	RAB4C101J						
⚠ T1321 SWITCHING TRANS.		ATK1160		R2001,R2002,R2017,R2021	RAB4C470J						
				R2004,R2005,R2019,R2020	RAB4C472J						
				Other Resistors	RS1/16S###J						D
<b>CAPACITORS</b>				<b>OTHERS</b>							
C1325		ACH1428		CN2001 40P CONNECTOR	AKM1217						
C1326		CEHAT100M50									
C1302,C1321		CEHAT101M25									
C1301,C1303,C1323		CKSRYB103K50		<b>[Y RESONANCE BLOCK]</b>							
C1304,C1306,C1327		CKSRYB104K16		<b>SEMICONDUCTORS</b>							
				IC2101	AXF1145						
C1307,C1324		CKSYB105K25		IC2141	BA10393F						
				Q2141	2SC4081						
				D2101-D2105	D1FL40						
<b>RESISTORS</b>				<b>COILS AND FILTERS</b>							E
R1337		RAB4C472J		L2101,L2102 CHOKE COIL	ATH1155						
R1321,R1322,R1326,R1339		RS1/10S224J		L2103-L2106 CHOKE COIL	ATH1193						
VR1321		CCP1392									
Other Resistors		RS1/16S###J									
<b>SUS CLAMP 1 ASSY</b>				<b>CAPACITORS</b>							
<b>SEMICONDUCTORS</b>				C2131-C2134,C2136	ACE1178						
D1631		DF20L60U		C2103,C2107,C2108 (0.22UF/250V)	ACG1112						
				C2104,C2106 (470P/630V)	ACG1126						
<b>CAPACITORS</b>				C2109-C2112 (3300P/630V)	ACG1129						
C1632		ACE1179		C2101,C2145	CKSRYB105K6R3						
<b>OTHERS</b>				C2141,C2143,C2144	CKSSYB104K10						
KN1632 GROUND PLATE		ANK-142		C2102	CKSYB105K25						F
CN1631 3P TOP POST		B3B-EH									
KN1631 WRAPPING TERMINAL		VNF1084									

**Mark No. Description****Part No.****Mark No. Description****Part No.****RESISTORS**

R2101  
R2108  
R2142,R2143  
R2103,R2107  
R2146,R2149

ACN1174  
ACN1241  
RS1/10S1003F  
RS1/10S104J  
RS1/16S5601F

R2147,R2151  
R2102  
Other Resistors

RS1/16S6801F  
RS2MMF100J  
RS1/16S###J

**[Y SUS BLOCK]****SEMICONDUCTORS**

IC2252,IC2253  
IC2350  
IC2250  
IC2231,IC2251  
IC2203,IC2221

AXF1144  
MM1565AF  
PS9117  
TND301S  
TND307TD

Q2202  
Q2250  
Q2290  
Q2221  
Q2280,Q2281

2SA2142  
2SC4081  
2SK3050  
2SK3325-Z  
2SK3399

D2233  
D2213  
D2203,D2212,D2351  
D2202,D2204,D2205,D2234  
D2251,D2252,D2272

1SS301  
1SS302  
1SS355  
CRH01  
CRH01

D2211  
D2232,D2271  
D2250

D1FK60  
UDZS16(B)  
UDZS5R6(B)

**COILS AND FILTERS**

L2353 INDUCTOR  
F2301-F2320 FERRITE BEAD  
F2352 INDUCTOR  
L2350,L2351,L2354

ATH1186  
ATX1055  
CTF1449  
LFEA100J

**CAPACITORS**

C2330,C2335,C2341,C2342  
C2231 (0.33U/100V)  
C2271,C2272 (0.1U/100V)  
C2336,C2337  
C2270

ACE1178  
ACG1118  
ACG1124  
ACH1424  
ACH1426

C2226  
C2203-C2206  
C2207  
C2355,C2369  
C2357

ACH1427  
CCG1186  
CCSRCH102J50  
CEHAT101M10  
CEHAT470M16

C2208,C2221,C2339,C2364  
C2356  
C2353,C2358,C2359  
C2363  
C2209,C2222,C2230,C2252

CEHAT470M25  
CKSRYB104K16  
CKSRYB105K6R3  
CKSRYB473K16  
CKSRYF104Z50

C2250  
C2354,C2360

CKSSYB104K10  
CKSYB105K25

**RESISTORS**

R2352  
R2304  
R2360,R2362  
R2210,R2211  
R2290

ACN1166  
ACN1174  
ACN1178  
RS1/10S151J  
RS1MMF331J

**OTHERS**

R2222,R2224  
R2203  
R2277-R2279,R2281  
Other Resistors

RS2MMF5R6J  
RS3LMF821J  
RS3LMF8R2J  
RS1/16S###J

KN2350,KN2352 GROUND PLATE  
KN2354 GROUND PLATE  
KN2356,KN2357 GROUND PLATE  
KN2359-KN2363 GROUND PLATE  
CN2351,CN2352 KR CONNECTOR

ANK-142  
ANK-142  
ANK-142  
ANK-142  
B4B-PH-K

CN2350 9P TOP POST

B9B-EH

**[Y SCAN BLOCK]****SEMICONDUCTORS**

IC2403,IC2405,IC2406,IC2408  
IC2401  
IC2409,IC2410  
IC2402,IC2407  
D2402

PS9117  
PS9851-2(P)  
PST3638UR  
TC74ACT540FT  
CRH01

**COILS AND FILTERS**

F2401-F2404 CHIP FERRITE BEAD  
L2401-L2403

ATX1059  
LFEA100J

**CAPACITORS**

C2404,C2411  
C2401,C2407,C2414  
C2416,C2417  
C2402,C2403,C2405,C2408-C2410  
C2412

ACH1406  
CEHAT101M10  
CKSRYB102K50  
CKSSYB104K10  
CKSSYB104K10

**RESISTORS**

R2407,R2421  
Other Resistors

RAB4C220J  
RS1/16S###J

**OTHERS**

CN2401,CN2402  
15P BRIDGE CONNECTOR

AKM1200  
AKM1200

**[Y VH D-D CON BLOCK]****SEMICONDUCTORS**

IC2531  
IC2502  
IC2503  
IC2534,IC2535  
Q2533

BA10358F  
MIP2E3DMC  
PS2701A-1(L)  
TA76431FR  
2SC2412K

Q2531  
Q2532  
Q2511  
D2534  
D2522,D2524

2SC3425  
2SD2568  
HN1C01FU  
1SS355  
CRH01

D2523,D2532  
D2533  
D2536  
D2530,D2531

D1FK60  
UDZS33(B)  
UDZS4R7(B)  
UDZS8R2(B)

**COILS AND FILTERS**

⚠ T2503 CONVERTER TRANS.  
L2501

ATK1158  
LFEA101J

The diagram illustrates the PDP-436PE architecture. A central box labeled "PDP-436PE" is connected to several components: a "5" (likely a power supply or input) on the left, a "6" (likely a memory or storage unit) below it, a "7" (likely a control or output unit) to its right, and an "8" (likely a peripheral or interface) further right. A large "37" is positioned at the far right, possibly indicating a total count or a specific component identifier.

**Mark No. Description****Part No.****Mark No. Description****Part No.****[MODULE UCOM BLOCK]  
SEMICONDUCTORS**

A

IC3156  
IC3151  
IC3157  
IC3158  
IC3155BR24L04FJ-W  
M30620FCPGP-U5C  
M62334FP  
MM1522XU  
SN74AHC08PW

IC3152,IC3153

SN74AHC541PW

IC3160

TC74VHC123AFTS1

IC3159

TC7W126FU

Q3151

2SJ461A

D3156,D3159,D3161-D3163

1SS355

D3151,D3152,D3154,D3155,D3158

DAN202U

**CAPACITORS**

C3151

ACH1357

C3164

CCSSCH101J50

C3171,C3172,C3180

CKSRYB105K6R3

C3154

CKSSYB102K50

C3152,C3153,C3155-C3158

CKSSYF104Z16

C3160-C3163,C3165,C3166,C3170

CKSSYF104Z16

**RESISTORS**

R3160,R3171,R3176

RAB4C101J

R3174

RAB4C103J

C

Other Resistors

RS1/16S###J

**OTHERS**

⚠ X3151 CERAMIC RESONATOR

ASS1178

**[PANEL FLASH BLOCK]  
SEMICONDUCTORS**

IC3301

MBM29PL160TD75TN

IC3304

PST3610UR

IC3302,IC3305

PST3628UR

IC3303

SN74AHC08PW

D

Q3302

HN1C01FU

Q3301

RN1901

**CAPACITORS**

C3311

CCSRCH470J50

C3317

CCSRCH471J50

C3304,C3307,C3309

CKSRYB472K50

C3305,C3310

CKSSYB102K50

C3315

CKSSYB104K10

C3301-C3303,C3306,C3308,C3316

CKSSYF104Z16

E

**RESISTORS**

All Resistors

RS1/16S###J

**OTHERS**

⚠ X3302 CRYSTAL OSCILLATOR

ASS1188

**[SQ ASIC BLOCK]  
SEMICONDUCTORS**

IC3401

PEG122C

**COILS AND FILTERS**

F

F3401,F3402 EMI FILTER

CCG1162

L3401-L3403 CHIP SOLID INDUCTOR QTL1013

**CAPACITORS**

C3402,C3419 (100UF/6.3V)

ACH1396

C3425,C3441 (100UF/6.3V)

ACH1396

C3414-C3416,C3426-C3438

CKSRYF105Z10

C3403-C3410,C3412,C3413

CKSSYF104Z16

C3417,C3418,C3420-C3424

CKSSYF104Z16

C3439,C3440,C3442-C3449

CKSSYF104Z16

**RESISTORS**

R3402,R3412

RAB4C101J

R3405-R3407,R3409,R3410

RAB4C220J

R3416,R3417

RAB4C220J

R3425

RS1/16S5601F

Other Resistors

RS1/16S###J

**[ADDRESS BLOCK]  
SEMICONDUCTORS**

D3501,D3502

DAN202U

**CAPACITORS**

C3501-C3504

CKSSYB102K50

**RESISTORS**

R3521,R3522,R3525

RAB4C101J

R3524

RAB4C222J

R3519,R3520

RAB4C472J

Other Resistors

RS1/16S###J

**OTHERS**

CN3501-CN3504 40P CONNECTOR

AKM1217

CN3506 40P CONNECTOR

AKM1217

CN3505 18P FFC CONNECTOR

VKN1310

**[DIGITAL DD CON BLOCK]  
CAPACITORS**

C3609

CKSSYF104Z16

**RESISTORS**

R3611

RAB4C101J

Other Resistors

RS1/16S###J

**HD LED ASSY  
SEMICONDUCTORS**

D1671

SML-311UT

D1672

SML512BC4T

**COILS AND FILTERS**

⚠ F1671-F1673 CHIP SOLID INDUCTOR QTL1011

**HD IR ASSY  
SEMICONDUCTORS**

Q1681

2SC4116

D1681

DA204U

**CAPACITORS**

C1681

CEVW470M6R3

C1682

CKSRYB103K50

C1683


CKSSYB102K50

C1684

CKSSYF104Z16



5	6	7	8	
Mark No.	Description	Part No.	Mark No.	Description
<b>RESISTORS</b>			<b>[ST TERMINAL BLOCK]</b>	
	All Resistors	RS1/16S###J	<b>COILS AND FILTERS</b>	
			⚠ L3901,L3902	LINE FILTER
<b>OTHERS</b>				ATF1206
CN1681	3P L TYPE PLUG	KM200NA3L	<b>CAPACITORS</b>	
V1681	REMOTE RECEIVER UNIT	RPM7240-H4	⚠ C3906,C3908,C3914,C3916	CCSRCH101J50
			C3903,C3911	CKSRYB332K50
			C3904,C3912	CKSRYF473Z50
<b>HD AUDIO ASSY</b>			<b>RESISTORS</b>	
<b>OTHERS</b>			R3901-R3904	RD1/2MMF100J
J3901	1P BOARD IN WIRE	ADX3123	<b>OTHERS</b>	
			JA3901	SPEAKER TERMINAL
				AKE1061
<b>[AUDIO AMP BLOCK]</b>			<b>POWER SUPPLY UNIT</b>	
<b>SEMICONDUCTORS</b>			POWER SUPPLY Unit has no service part.	
IC3754		BR24L02FJ-W		
IC3751		LA4625		
IC3752		NJM7809FA		
IC3753		NJW1183L		
Q3751,Q3754,Q3755,Q3757		2SA1576A		
Q3756,Q3759		2SC4081		
Q3758,Q3760		DTC124EUA		
<b>CAPACITORS</b>				
C3797,C3808,C3812,C3814		CEAT1R0M50		
C3775,C3777,C3788,C3790,C3791		CEHAT100M50		
C3799		CEHAT100M50		
C3761,C3764,C3786,C3798		CEHAT101M16		
C3766,C3780,C3783-C3785		CEHAT1R0M50		
C3762		CEHAT220M50		
C3752,C3753,C3819,C3820		CEHAT2R2M50		
C3759		CEHAT331M16		
C3757		CEHAT471M25		
C3755		CEHAT472M25		
C3763		CEHATR47M50		
C3754,C3805		CFTLA103J50		
C3767,C3770,C3772-C3774		CFTLA104J50		
C3781,C3782,C3789,C3792-C3795		CFTLA104J50		
C3806,C3807,C3813		CFTLA104J50		
C3778		CFTLA334J50		
C3758,C3760,C3796		CKSRYB103K50		
C3769,C3815		CKSRYB222K50		
C3810		CKSRYB223K50		
C3779		CKSRYB822K50		
C3816		CKSRYF104Z16		
<b>RESISTORS</b>				
R3768-R3770,R3782		RD1/2MMF2R2J		
R3752		RD1/2MMF4R7J		
Other Resistors		RS1/16S###J		
<b>OTHERS</b>				
CN3752	12P PH CONNECTOR	AKM1335		
3771	AUDIO HEATSINK	ANH1636		
CN3751	3P TOP POST (VH)	B3P-VH		
3772-3775	SCREW	VBB30P100FNI		
KN3751	WRAPPING TERMINAL	VNF1084		
KN3752	WRAPPING TERMINAL	VNF1084		

- A
- 
1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.

2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.

3. Use a stable AC power supply.

6.1 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

B

POWER SUPPLY Unit	➡	(Clear the history data on the number of power-ons.) Refer to "7.1.7 HOW TO CLEAR HISTORY DATA."
HD DIGITAL Assy	➡	Writing of backup data is required. Refer to the "7.1.6 BACKUP WHEN THE MAIN UNIT IS ADJUSTED."
50 X DRIVE Assy	➡	No adjustment required
50 Y DRIVE Assy	➡	No adjustment required
Service Panel	➡	Refer to the "6.3 METHOD FOR REPLACING THE SERVICE PANEL ASSY."
Other assemblies	➡	No adjustment required

■ When any part in the following assemblies is replaced

D

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
HD DIGITAL Assy	➡	No adjustment required
50 X DRIVE Assy	➡	No adjustment required
50 Y DRIVE Assy	➡	No adjustment required
Other assemblies	➡	No adjustment required

E

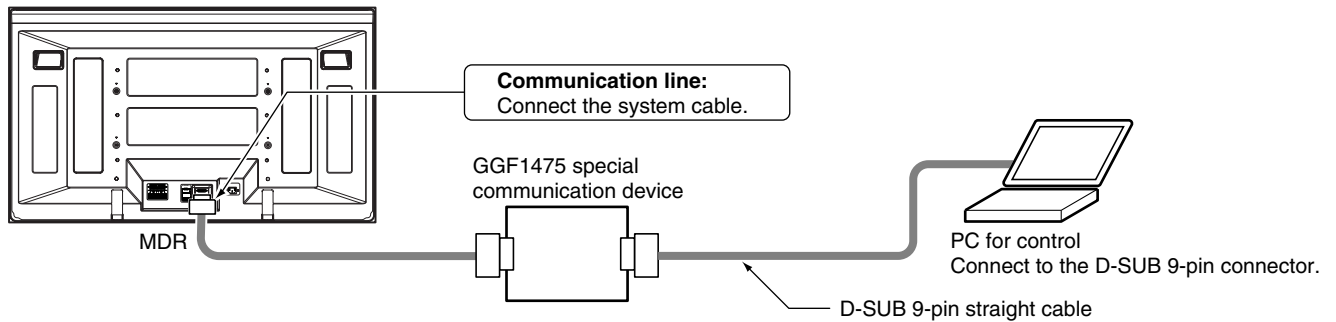


## 6.2 RS-232C COMMAND

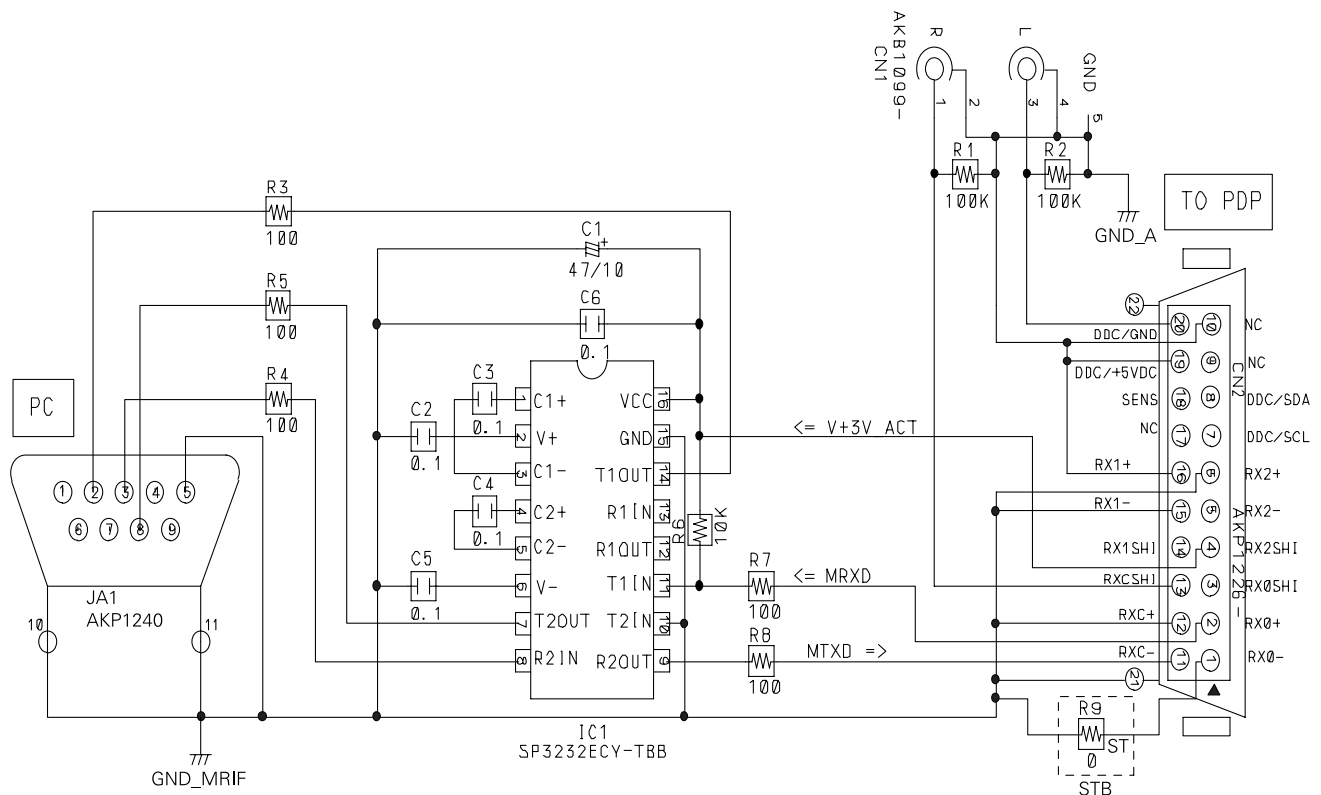
- The panel control items for the PDP-506PE, PU / PDP-436PE, PU systems can be controlled with the RS-232C commands by connecting a PC through the GGF1475 special communication device when the Media Receiver is not connected with the PDP.

**Note:** The special communication device for the PDP-503P cannot be used with this unit, because the control lines within the MDR cable are different.

### 1. Connection



### • Schematic diagram of the special communication device



## 2. Command format

### ■ Communication protocol

Start bit : 1bit  
 Data : 8bit  
 Parity : 0 (none)  
 Stop bit : 1bit  
 Baud rate : 38400bps

### ■ Start and stop conditions

STX (start condition): 0x02  
 ETX (stop condition): 0x03

### ■ ID setting

No ID setting (corresponding to all ASCII codes)

### ■ Acknowledgement (ACK)

- Acknowledgement (ACK) will be sent back when the unit returns to Standby mode for the next command after the process of the received command is finished.
- The return data will be a received command in capital letters, but without an ID.

Example of communication: For a command listed on the command list

MR / External PC

STX	ID	Command	ETX
0x02	**	CBU	0x03



Returns from the PDP

STX	Command	ETX
0x02	CBU	0x03

- If a received command is not one listed on the command list, "ERR" (3 characters) will be sent back.

Example of communication: For a command that is not listed on the command list

MR / External PC

STX	ID	Command	ETX
0x02	**	AAA	0x03



Returns from the PDP

STX	Command	ETX
0x02	ERR	0x03

- If the operation of a received command is not possible in a certain status, "XXX" (3 characters) will be sent back.

Example of communication: If an adjustment command that gives an adjustment value out of the adjustable range is sent

MR / External PC

STX	ID	Adjustment Command	Adjustment Value	ETX
0x02	**	VOL	128	0x03



Returns from the PDP

STX	Command	ETX
0x02	XXX	0x03

### ■ Error process

If an error is generated between STX and ETX, a return signal will not be issued.

### 3. Definition of various commands

#### ■ Simple-function command

A simple-function command orders an operation that will conclude by itself, and it consists of 3 characters.

Example of communication:

MR / External PC

STX	ID	Command	ETX
0x02	**	CPD	0x03



Returns from the PDP

STX	Command	ETX
0x02	CPD	0x03

#### ■ Adjustment command and adjustment value

An adjustment command is accompanied by an adjustment value and orders a change in the adjustment value, such as for the contrast adjustment.

- Adjustment command + adjustment value => The attached parameter will be the adjustment value.
- The adjustment value to be attached to an adjustment command consists of 3 characters in decimal, in the range of 000 to 999.

Example of communication:

MR / External PC

STX	ID	Adjustment Command	Adjustment Value	ETX
0x02	**	CNT	128	0x03



Returns from the PDP

STX	Adjustment Command	Adjustment Value	ETX
0x02	CNT	128	0x03

- If the adjustment value of the received command is out of the adjustable range, "XXX" will be sent back, and the adjustment value will not be changed.
- If the adjustment value of the received command is the same as the current adjustment value, the adjustment value will be overwritten, and "XXX" will not be sent back.

#### ■ Setup command and setup value

A setup command is accompanied by a setup value and orders a change in the setup value, such as for the mask setup.

- Setup command + setup value => The attached parameter will be the setup value.
- The setup value to be attached to a setup command consists of 3 characters in decimal, in the range of S00 to S99.

Example of communication:

MR / External PC

STX	ID	Adjustment Command	Adjustment Value	ETX
0x02	**	MKS	S02	0x03



Returns from the PDP

STX	Adjustment Command	Adjustment Value	ETX
0x02	MKS	S02	0x03

- If the setup value of the received command is out of the range, "XXX" will be sent back, and the setup value will not be changed.
- If the setup value of the received command is the same as the current setup value, the setup value will be overwritten, and "XXX" will not be sent back.

#### ■ QUEST (acquiring status) command

If a QUEST command is received from the main unit's microcomputer, data for various adjustment values will be read from memory and sent back. The return data consist of the received command as an echo back, return data, and a checksum.

- Return data: A string of characters defined for each QUEST command is converted into ASCII codes and transmitted.
- The configuration and the data length of return data are defined for individual QUEST commands.

Example of communication:

MR / External PC

STX	ID	QST Command	ETX
0x02	**	QS1	0x03



Returns from the PDP

STX	QST Command	Return Data	Checksum	ETX
0x02	QS1	54AHM2**	7B	0x03

- Checksum (CS): A checksum is used for judging if any error exists in the data sent back from the panel. If an error is detected, it is possible to resend the QUEST command from the MR / External PC to try to acquire data again.

#### 4. RS-232C command for module microcomputer

Command Name		Function	Effective only in Factory mode	Remarks
<b>A</b>				
ABL	***	ABL ADJUSTMENT	Adjusting the upper limit of the power	○
AMT	S00	AUDIO MUTE OFF	Turning off the audio muting	
	S01	AUDIO MUTE ON	Turning on the audio muting	
APW	S00	APL WB FUNCTION:OFF	WB correction interlocked with APL: OFF	○
	S01	APL WB FUNCTION:ON	WB correction interlocked with APL: ON	○
<b>B</b>				
BAL	***	BALANCE ADJUSTMENT	Audio balance adjustment	
BAS	***	BASS ADJUSTMENT	Audio bass adjustment	
BCP		BACKUP COPY	Copying the backup data in the EEPROM	○
<b>C</b>				
CBU		CLEAR BACKUP	Clearing backup data	○
CHM		CLEAR HOUR METER	Clearing data of the hour meter	○ Used only when the panel is replaced
CPC		CLEAR POWER ON COUNT	Clearing power-on count data	○ Used only when the power unit is replaced
CPD		CLEAR POWER DOWN	Clearing power-down information	○ Used only when the panel is replaced
CPM		CLEAR PLUSE METER	Clearing data of the pulse meter	○ Used only when the panel is replaced
CSD		CLEAR SHUT DOWN	Clearing shutdown information	○ Used only when the panel is replaced
<b>D</b>				
DRV	S00	DRIVE OFF	Main power off	
	S01	DRIVE ON	Main power on	
<b>E</b>				
ESV	S00	POWER CONTROL NORMAL	Setting Power Consumption mode to 4-split normal curve	
	S01	POWER CONTROL MODE1	Setting Power Consumption mode to 2-split normal curve	
	S02	POWER CONTROL MODE2	Setting Power Consumption mode to 2-split power-saving curve	
	S10	POWER CONTROL NORMAL	Setting Power Consumption mode to 4-split normal curve (domestic)	
	S11	POWER CONTROL MODE1	Setting Power Consumption mode to 2-split normal curve (domestic)	
	S12	POWER CONTROL MODE2	Setting Power Consumption mode to 2-split power-saving curve (domestic)	
<b>F</b>				
FAJ		FINISH ADJUSTMENT	Determining the flag of the HD DIGITAL Assy adjustment in "adjustment is completed"	○
FAN		FACTRY NO		○
FAY		FACTRY YES	Entering Factory mode	Turning the mask setting off
FCS	S00	FOCUS OFF	Turning the FOCUS function off	
	S01	FOCUS ON	Turning the FOCUS function on	
<b>M</b>				
MKC	S00	MASK COMBINATION OFF	MASK off	
	S01	MASK COMBINATION 01	H ramp (slant 1) M	○
	S02	MASK COMBINATION 02	H ramp (slant 4) M	○
	S03	MASK COMBINATION 03	Slanting ramp M	○
	S04	MASK COMBINATION 04	30 for aging	○
	S05	MASK COMBINATION 05	05 for aging	○
	S06	MASK COMBINATION 06	Erasing afterimage 1	○
	S07	MASK COMBINATION 07	Erasing afterimage 2 (RGB: zigzag, V: reverse)	○
	S08	MASK COMBINATION 08	White (change in luminance level)	○
	S09	MASK COMBINATION 09	PEAK SEEK RASTER	○
MKS	S00	MASK SINGLE OFF	MASK OFF	
	S01	MASK SINGLE 1	H ramp (slant 1)	○
	S02	MASK SINGLE 2	H ramp (slant 4)	○
	S03	MASK SINGLE 3	V ramp (slant 1)	○
	S04	MASK SINGLE 4	Slanting ramp	○

Command Name		Function		Effective only in Factory mode	Remarks
MKS	S05	MASK SINGLE 5	Window(Hi=870Lo=102)	○	
	S06	MASK SINGLE 6	Window(Hi=1023Lo=102)	○	
	S07	MASK SINGLE 7	Window(Hi=1023)	○	
	S08	MASK SINGLE 8	Window(Hi=1023)4%	○	
	S09	MASK SINGLE 9	Window(Hi=1023)1.25%	○	
	S10	MASK SINGLE 10	Window(1/7LINE)	○	
	S11	MASK SINGLE 11	STRIPE(MGT/GRN)	○	
	S12	MASK SINGLE 12	STRIPE(GRN/MGT)	○	
	S13	MASK SINGLE 13	B & W, checker (1 line)	○	
	S14	MASK SINGLE 14	B & W, checker (2 lines)	○	
	S15	MASK SINGLE 15	B & W, checker (4 lines)	○	
	S16	MASK SINGLE 16	B & W, checker (8 lines)	○	
	S17	MASK SINGLE 17	COLOR BAR	○	
	S18	MASK SINGLE 18	Slanting lines	○	
	S19	MASK SINGLE 19	Red & black, checker (1 line)	○	
	S20	MASK SINGLE 20	Red & black, checker (2 lines)	○	
	S21	MASK SINGLE 21	Red & black, checker (4 ines)	○	
	S22	MASK SINGLE 22	Red & black, checker (8 lines)	○	
	S23	MASK SINGLE 23	RGB zigzag, V reverse	○	
	S24	MASK SINGLE 24	SUS 2000 pulses (black raster)	○	
	S25	MASK SINGLE 25	Window(Hi=870Lo=102) PATTAN3	○	
	S26	MASK SINGLE 26	Window(Hi=1023Lo=102) PATTAN3	○	
	S27	MASK SINGLE 27	Window(Hi=1023) Pattern 3	○	
	S28	MASK SINGLE 28	Window(Hi=1023)4% Pattern 3	○	
	S29	MASK SINGLE 29	Window(Hi=1023)1.25% Pattern 3	○	
	S30	MASK SINGLE 30	Window(1/7LINE) Pattern 3	○	
	S51	MASK SINGLE 51	Raster - White	○	
	S52	MASK SINGLE 52	Raster - Red	○	
	S53	MASK SINGLE 53	Raster - Green	○	
	S54	MASK SINGLE 54	Raster - Blue	○	
	S55	MASK SINGLE 55	Raster - Black	○	
	S56	MASK SINGLE 56	Raster - Cyan	○	
	S57	MASK SINGLE 57	Raster - Magenta	○	
	S58	MASK SINGLE 58	Raster - Yellow	○	
	S59	MASK SINGLE 59	Raster - Cyan 460 :W	○	
	S60	MASK SINGLE 60	Raster - Green 774 :W	○	
	S61	MASK SINGLE 61	Raster - Gray 912 :W	○	
	S62	MASK SINGLE 62	Raster - Yellow egg color: W	○	
	S63	MASK SINGLE 63	Raster - Beige: W	○	
	S64	MASK SINGLE 64	Raster - Sky color: W	○	
	S65	MASK SINGLE 65	Raster - Pale purple: W	○	
	S66	MASK SINGLE 66	Raster - Magenta 54 :W	○	
	S67	MASK SINGLE 67	Raster - Red 588	○	
	S68	MASK SINGLE 68	Red 1023 + $\alpha$	○	
	S69	MASK SINGLE 69	Green 1023 + $\alpha$	○	
	S70	MASK SINGLE 70	Blue 1023 + $\alpha$	○	
	S71	MASK SINGLE 71	Red 588 + $\alpha$	○	
	S72	MASK SINGLE 72	Green 588 + $\alpha$	○	
	S73	MASK SINGLE 73	Blue 588 + $\alpha$	○	

A

B

C

D

E

F

Command Name		Function		Effective only in Factory mode	Remarks
MKS	S74	MASK SINGLE 74	Raster -Gray 512 (reservation)	○	
P					
PAV	S**	PANEL AV MODE	Switching panel functions interlocked with the AV selection		
PBH	***	PANEL BLUE HIGH	Panel white balance adjustment - Blue highlight	○	
PBL	***	PANEL BLUE LOW	Panel white balance adjustment - Blue low light	○	
PDM	S00	PD MUTE OFF	Passing PD signals to the Power SUPPLY Unit => Power-down		
	S01	PD MUTE ON	Not passing PD signals to the Power SUPPLY Unit => No power-down		
PFN		FACTORY NO	Factory mode: off	○	
PFS		PANEL FINAL SETUP	Setup at shipment	○	
PFY		FACTORY YES	Factory mode: on		
PGH	***	PANEL GREEN HIGH	Panel white balance adjustment - Green highlight	○	
PGL	***	PANEL GREEN LOW	Panel white balance adjustment - Green low light	○	
PGM	S**	PANEL GAMMA	Setting of the gamma table		
PMT	S00	MUTE OFF	Canceling panel muting		
	S01	MUTE ON	Panel muting		
POF		POWER OFF	Power off		
PON		POWER ON	Power on		
PPT	S00	PANEL PROTECT OFF	Panel protection: off	○	
	S01	PANEL PROTECT ON	Panel protection: on	○	
PUC	S00	PUER CINEMA:OFF	Pure cinema: off		
	S01	PUER CINEMA:STD	Pure cinema: standard		
	S02	PUER CINEMA:ADV	Pure cinema: advanced		
Q					
QAJ		QUEST ADJUSTMENT	Acquiring various adjustment values		
QIP		QUEST PANEL INFORMATION	Acquiring various input signal data		
QPD		QUEST POWER-DOWN	Acquiring logs of power-down points		
QPM		QUEST PULSE METER	Acquiring data of the pulse meter		
QPW		QUEST PANEL WHITE BALANCE	Acquiring panel white balance adjustment values		
QS1		QUEST STATUS 1	Acquiring data on the unit, such as the version of the program		
QS2		QUEST STATUS 2	Acquiring data on the status of the unit, such as temperature		
QSD		QUEST SHUT DOWN	Acquiring data on shutdown		
QSI		QUEST SIGNAL INFORMATION	Acquiring data related with signals		
R					
RBL	S**	PANEL REVISE BLUE LEVEL	Setting of blue level for panel degradation correction	○	
RGL	S**	PANEL REVISE GREEN LEVEL	Setting of green level for panel degradation correction	○	
RHI	***	RED HIGH	User white balance - Red highlight		
RLW	***	RED LOW	User white balance - Red low light		
RRL	S**	PANEL REVISE RED LEVEL	Setting of red level for panel degradation correction	○	
RSW	***	XY-RST-W ADJ	Adjustment of the width of XY reset pulse	○	
S					
SDM	S00	SD MUTE OFF	Shutdown enabled		
	S01	SD MUTE ON	Shutdown prohibited		
SFR	S01	SUS FREQUENCY MODE1	Measures against AM radio noise - Pattern 1	○	
	S02	SUS FREQUENCY MODE2	Measures against AM radio noise - Pattern 2	○	
	S03	SUS FREQUENCY MODE3	Measures against AM radio noise - Pattern 3	○	
	S04	SUS FREQUENCY MODE4	Measures against AM radio noise - Pattern 4	○	
	S05	SUS FREQUENCY MODE5	Measures against AM radio noise - Pattern 5	○	
	S06	SUS FREQUENCY MODE6	Measures against AM radio noise - Pattern 6	○	
	S07	SUS FREQUENCY MODE7	Measures against AM radio noise - Pattern 7	○	

Command Name		Function		Effective only in Factory mode	Remarks
SFR	S08	SUS FREQUENCY MODE8	Measures against AM radio noise - Pattern 8	○	
SMM	S**	SIDE MASK MODE	Setting of the effective area during streaking correction	○	
SN0	***	SERIAL NO 0	Setting of the serial No. 0 (panel)	○	
SN1	***	SERIAL NO 1	Setting of the serial No. 1 (panel)	○	
SN2	***	SERIAL NO 2	Setting of the serial No. 2 (panel)	○	
SN3	***	SERIAL NO 3	Setting of the serial No. 3 (panel)	○	
SN4	***	SERIAL NO 4	Setting of the serial No. 4 (panel)	○	
SRS	S00	SRS OFF	SRS function: off		
	S01	SRS ON	SRS function: on		
SYS	S00	SYSTEM CABLE NO	Prohibiting monitoring of cable disconnection detection		
	S01	SYSTEM CABLE YES	Permitting monitoring of cable disconnection detection		
T					
TBS	S00	TRUBASS OFF	TruBass function: off		
	S01	TRUBASS ON	TruBass function: on		
TRE	***	TREBLE ADJUSTMENT	Audio treble adjustment		
U					
UAJ		UN-ADJUSTMENT	Determining the flag for the HD DIGITAL Assy adjustment in "not adjusted"	○	
V					
VFQ	S01	FREQUENCY VIDEO 48Hz	Setting the frequency in Mask mode to VD-48 Hz	○	
	S02	FREQUENCY VIDEO 50Hz	Setting the frequency in Mask mode to VD-50 Hz	○	
	S03	FREQUENCY VIDEO 60Hz	Setting the frequency in Mask mode to VD-60 Hz	○	
	S05	FREQUENCY THEATER 72Hz	Setting the frequency in Mask mode to VD-72 Hz	○	
	S06	FREQUENCY 75Hz	Setting the frequency in Mask mode to VD-75 Hz	○	
	S13	FREQUENCY PC 60Hz	Setting the frequency in Mask mode to PC-60 Hz	○	
	S14	FREQUENCY PC 70Hz	Setting the frequency in Mask mode to PC-70 Hz	○	
	S22	FREQUENCY VIDEO 50Hz NONSTD	Setting the frequency in Mask mode to VD-50 Hz (nonstandard)	○	
	S23	FREQUENCY VIDEO 60Hz NONSTD	Setting the frequency in Mask mode to VD-60 Hz (nonstandard)	○	
	S25	FREQUENCY VIDEO 72Hz NONSTD	Setting the frequency in Mask mode to VD-72 Hz (nonstandard)	○	
	S26	FREQUENCY VIDEO 75Hz NONSTD	Setting the frequency in Mask mode to VD-75 Hz (nonstandard)	○	
VOF	***	Vofs ADJUSTMENT	Adjustment of the reference value of Vofs voltage	○	
VOL	***	VOLUME	Audio volume adjustment		
VRP	***	Vrp ADJUSTMENT	Adjustment of the reference value of Vrst-p voltage	○	
VSU	***	Vsus ADJUSTMENT	Adjustment of the reference value of Vsus voltage	○	
W					
WBI	S00	WB INITIALIZE NO	Panel WB standard output mode: off	○	
WBI	S01	WB INITIALIZE YES	Panel WB standard output mode: on	○	
X					
XSB	***	X-SUS-B ADJ	X-SUS-B ADJ	○	
Y					
YSB	***	Y-SUS-B ADJ	Y-SUS-B ADJ	○	
YTG	***	Y-SUSTAIL ADJ	Y-SUSTAIL ADJ	○	
YTW	***	Y-SUSTAIL W AJD	Y-SUSTAIL W AJD	○	

## 5. QUEST commands (for acquiring status)

With a QUEST command, data on STBY/ON, PD, and SD can be obtained while the unit is on.

### ■ Acquisition of panel statuses • • • [QS1]

The command QS1 is for acquiring data necessary for authentication of both the main unit's microcomputer and the module's microcomputer.

Command Format	Effective Operation Modes	Function	Remarks
[QS1]	All operations	To acquire data on product status	Return data: 3 (ECO)+43(DATA)+2(CS)=48Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QS1
1	Resolution/size	1Byte	5
2	Generation	1Byte	6
3	Destination	1Byte	*
4	Grade	1Byte	*
5	Product type	1Byte	S
6	MDUcom-Boot	3Byte	01A
7	MDUcom-PRG	8Byte	001SM "space × 3"
8	SEQUENCE PROCESSOR-Boot	3Byte	01A
9	SEQUENCE PROCESSOR-Boot	8Byte	001AM "space × 3"
10	SQ-VIDEO(43/42)	4Byte	001X
11	SQ-PC(43/42)	4Byte	001X
12	SQ-VIDEO(50/61)	4Byte	001W
13	SQ-PC(50/61)	4Byte	001W
CS		2Byte	7B

● Resolution/size	
4	1024*768-43
5	1280*768-50

● Generation	
6	G6

● Destination	
*	Common

● Grade	
*	Common

● MDUcom/SEQUENCE PROCESSOR-Boot • • • 3Byte		
1st character	Representing the boot version in 2-digit decimal	
2nd character		
3rd character	A	When the boot version is common to 43/50
	X	When the boot version is only for 43
	W	When the boot version is only for 50

● Product type	
S	System model

● MDUcom/SEQUENCE PROCESSOR-PRG • • • 8Byte		
1st character	–	For a mass-production product
2nd character	For representing the version in 2-digit decimal	
3rd character		
4th character	A	When the program is common to 43/50 (for SEQUENCE PROCESSOR)
	S	When the program is only for another unit (for MDUcom)
5th character	M	Fixed
6th character		Reservation
7th character		Reservation
8th character		Reservation

● SEQUENCE-Data • • • 8Byte		
1st - 3rd characters	Num	For representing the version in 3-digit decimal
4th character	W	When the sequence data are only for 50
	X	When the sequence data are only for 43

• For the version indication, the bytes reserved for special use must be replaced with spaces if they are not used.



## ■ Acquisition of panel operation data • • • [QS2]

The command QS2 is for acquiring data on the panel's operations. Basically, this command is used for the module's microcomputer to inform the main unit's microcomputer of changes in panel operation.

Command Format	Effective Operation Modes	Function	Remarks
[QS2]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+23(DATA)+2(CS)=28Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QS2
1	Notification of mode shifting to STB	1Byte	1
2	Flag for adjustment of the main unit	1Byte	0
3	Flag for adjustment-data backup	1Byte	0
4	"1st PD" data	1Byte	0
5	"2nd PD" data	1Byte	0
6	Reservation	3Byte	***
7	Temperature data (TEMP 1)	3Byte	128
8	SD main data	1Byte	0
9	SD subdata	1Byte	0
10	Operation status induced by SD	1Byte	0
11	Data from the hour meter	8Byte	00000259
12	MASK indication	1Byte	0
CS		2Byte	4A

**Note :** "00000259" of "Data from the hour meter" means 2 hours 59 minutes.

● Notification of mode shifting to Standby	
0	Entering Standby mode failed
1	Entering Standby mode succeeded

● Adjustment of the main unit	
0	Adjustment completed
1	Adjustment not completed

● Adjustment-data backup	
0	With backup data
1	No data

● PD data	
0	No PD data
1	Not used
2	POWER
3	SCAN
4	SCN-5V
5	Not used
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRV
A	X-DCDC
B	X-SUS
C	Not used
D	SQ-IC
E	Not used
F	Specification inability

● SD main data	
0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	Panel having high temperature
5	Short-circuited speaker

● SD subdata (IIC)	
0	No SD subdata
1	EEPROM
2	BACKUP
3	DAC
4	VOL IC
5	DVI

● Operation status induced by SD	
0	Normal
1	Relay-off completed
2	During warning indication

● MASK indication	
0	MASK-OFF
1	MASK-ON

A

### ■ Acquisition of other data on the panel ••• [QIP]

The command QIP is for acquiring data other than those available with QS1 (data necessary before turning the power on) and QS2 (data to inform of operational status change).

Command Format	Effective Operation Modes	Function	Remarks
[QIP]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+39(DATA)+2(CS)=44Byte

B

Data Arrangement		Data Length	Output Example
ECO		3Byte	QIP
1	SERIAL	15Byte	-----
2	HOUR METER	8Byte	00000000
3	BACKUP HR MTR	8Byte	00000000
4	PON COUNTER	8Byte	00000000
CS		2Byte	94

**Note :** The real product serial number is displayed in "SERIAL".

C

### ■ Acquisition of panel adjustment data (common data) ••• [QAJ]

The command QAJ is for acquiring data on the panel's factory-preset items that are common to the main unit and that share the same memory.

Command Format	Effective Operation Modes	Function	Remarks
[QAJ]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+27(DATA)+2(CS)=32Byte

D

Data Arrangement		Data Length	Output Example
ECO		3Byte	QAJ
1	V-SUS adjustment value	3Byte	128
2	V-OFT adjustment value	3Byte	128
3	V-RST-P adjustment value	3Byte	128
4	XSB adjustment value	3Byte	128
5	YSB adjustment value	3Byte	128
6	YTG adjustment value	3Byte	128
7	YTW adjustment value	3Byte	128
8	RSW adjustment value	3Byte	128
9	R-RIVISE setting value	1Byte	0
10	G-RIVISE setting value	1Byte	0
11	B-RIVISE setting value	1Byte	0
CS		2Byte	B7

F

### ■ Acquisition of ABL/WB adjustment data ••• [QPW]

The command QPW is for acquiring data on the panel's factory-preset items whose memory tables are changed in sequence.

Command Format	Effective Operation Modes	Function	Remarks
[QPW]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+35(DATA)+2(CS)=40Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPW
1	Drive sequence	3Byte	60V
2	Standard/nonstandard	1Byte	S
3	Type of ABL/WB tables	2Byte	T2
4	ABL adjustment value	3Byte	128
5	R-HIGH adjustment value	3Byte	256
6	G-HIGH adjustment value	3Byte	256
7	B-HIGH adjustment value	3Byte	256
8	R-LOW adjustment value	3Byte	512
9	G-LOW adjustment value	3Byte	512
10	B-LOW adjustment value	3Byte	512
11	Gamma setting	1Byte	A
12	Streaking correction	1Byte	1
13	Peripheral luminance correction	1Byte	0
14	Reservation	1Byte	*
15	WB interlocked with APL	1Byte	0
16	Transition of protective operations	1Byte	0
17	Reservation	2Byte	**
CS		2Byte	37

#### ● Drive sequence

48V	Video48 Hz
50V	Video50 Hz
60V	Video60 Hz
72V	Video72 Hz
75V	Video75 Hz
60P	PC60Hz
70P	PC70Hz

#### ● Setting for Items 12 and 15

0	OFF
1	ON

#### ● Peripheral luminance correction

0	OFF
2	ON (interlocked with APL)

#### ● Standard/nonstandard

S	Standard
N	Nonstandard

#### ● Transition of brightness by protective operations

0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

#### ● Gamma setting

n	0 to F
---	--------

#### ● Type of ABL/WB tables

Tn	n: 1 to 4
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### ■ Acquisition of parameters ••• [QPM]

The command QPM is for acquiring the accumulated number of pulses for each of 5 blocks from the EEPROM.

Command Format	Effective Operation Modes	Function	Remarks
[QPM]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+40(DATA)+2(CS)=45Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPM
1	Pulse meter B 1	8Byte	00000000
2	Pulse meter B 2	8Byte	00000000
3	Pulse meter B 3	8Byte	00000000
4	Pulse meter B 4	8Byte	00000000
5	Pulse meter B 5	8Byte	00000000
CS		2Byte	E7

- The output data on the accumulated number of pulses for each block are calculated in the following way: the high-order 4 bytes of the accumulated number of pulses for each block are converted into a decimal number, and the high-order 8 digits are transmitted. The unit of each block is M\_pulse (mega).

## ■ Acquisition of PD logs • • • [QPD]

The command QPD is for acquiring data from the 8 latest power-down (PD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QPD]	All operations	To acquire data on the power-down logs	Return data: 3 (ECO)+80(DATA)+2(CS)=85Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPD
1	Latest "1st PD" data	1byte	A
2	Latest "2nd PD" data	1byte	2
3	Data from the hour meter for the latest PD	8byte	00010020
4	Second latest "1st PD" data	1byte	E
5	Second latest "2nd PD" data	1byte	9
6	Data from the hour meter for the second latest PD	8byte	00008523
7	Third latest "1st PD" data	1byte	4
8	Third latest "2nd PD" data	1byte	3
9	Data from the hour meter for the third latest PD	8byte	00004335
10	Fourth latest "1st PD" data	1byte	2
11	Fourth latest "2nd PD" data	1byte	0
12	Data from the hour meter for the fourth latest PD	8byte	00000945
13	Fifth latest "1st PD" data	1byte	4
14	Fifth latest "2nd PD" data	1byte	0
15	Data from the hour meter for the fifth latest PD	8byte	00000715
16	Sixth latest "1st PD" data	1byte	A
17	Sixth latest "2nd PD" data	1byte	2
18	Data from the hour meter for the sixth latest PD	8byte	00000552
19	Seventh latest "1st PD" data	1byte	A
20	Seventh latest "2nd PD" data	1byte	0
21	Data from the hour meter for the seventh latest PD	8byte	00000213
22	Eighth latest "1st PD" data	1byte	D
23	Eighth latest "2nd PD" data	1byte	0
24	Data from the hour meter for the eighth latest PD	8byte	000001A7
CS		2Byte	27

● PD data	
0	No PD
1	Not used
2	P-POWER
3	SCAN
4	SCN-5V
5	Not used
6	Y-DCDC
7	Y-SUS
8	Address
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D	QS (driving stopped)
E	Not used
F	Specification inability

## ■ Acquisition of SD logs ••• [QSD]

The command QSD is for acquiring the data from the 8 latest shutdown (SD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QSD]	All operations	To acquire data on the shutdown logs	Return data: 3 (ECO)+80(DATA)+2(CS)=85Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QSD
1	Latest SD data	1byte	1
2	Latest SD subcategory data	1byte	0
3	Data from the hour meter for the latest SD	8byte	00752013
4	Second latest SD data	1byte	5
5	Second latest SD subcategory data	1byte	0
6	Data from the hour meter for the second latest SD	8byte	00495204
7	Third latest SD data	1byte	2
8	Third latest SD subcategory data	1byte	3
9	Data from the hour meter for the third latest SD	8byte	00100355
10	Fourth latest SD data	1byte	2
11	Fourth latest SD subcategory data	1byte	5
12	Data from the hour meter for the fourth latest SD	8byte	00075620
13	Fifth latest SD data	1byte	1
14	Fifth latest SD subcategory data	1byte	0
15	Data from the hour meter for the fifth latest SD	8byte	00000852
16	Sixth latest SD data	1byte	2
17	Sixth latest SD subcategory data	1byte	5
18	Data from the hour meter for the sixth latest SD	8byte	000000451
19	Seventh latest SD data	1byte	0
20	Seventh latest SD subcategory data	1byte	0
21	Data from the hour meter for the seventh latest SD	8byte	00000000
22	Eighth latest SD data	1byte	0
23	Eighth latest SD subcategory data	1byte	0
24	Data from the hour meter for the eighth latest SD	8byte	00000000
CS		2Byte	7D

### ● SD data

0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	Panel having high temperature
5	Short-circuited speaker

### ● SD subcategory

0	No SD subcategory
1	EEPROM
2	BACKUP
3	DAC
4	VOL-IC
5	DVI
6	Not used

A

## ■ Acquisition of input signal data ••• [QSI]

The command QSI is for acquiring all data on input video signals.

Command Format	Effective Operation Modes	Function	Remarks
[QSI]	All operations	To acquire all data on input video signals	Return data: 3 (ECO)+66(DATA)+2(CS)=71Byte

B

Data Arrangement		Data Length	Output Example
ECO		3Byte	QSI
1	Type of drive sequence	3byte	60V
2	Standard/nonstandard	1byte	S
3	Type of ABL/WB tables	2byte	T1
4	Total value of PCN	4byte	0256
5	Total value of PRH	4byte	0256
6	Total value of PGH	4byte	0256
7	Total value of PBH	4byte	0256
8	Total value of PBR	4byte	0512
9	Total value of PRL	4byte	0512
10	Total value of PGL	4byte	0512
11	Total value of PBL	4byte	0512
12	Reservation	2byte	**
13	Detection of existence of H	1byte	Y
14	Detection of V frequency	4byte	6002
15	Reservation	4byte	****
16	Obtained APL data	4byte	1023
17	Number of SUS pulses	4byte	0457
18	Result of detection of still picture	1byte	1
19	Result of detection of cracking in the panel	1byte	1
20	Result of detection for scanning protection	1byte	1
21	Result of detection for external protection	1byte	1
22	Transition of protection operation	1byte	0
23	Reservation	4byte	****
CS		2Byte	27

### ● Detection of existence of H

N	No H
Y	H detected

### ● Transition of brightness by protection operation

0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

C

D

E

- If data for an item cannot be obtained during Standby mode, the return data for that item will be "\*."
- The types of data for Items 1-3 in the table (drive sequence, standard/nonstandard, and type of ABL/WB tables) are the same as with the command QPW.
- Each total value for Items 4-11 represents that of panel WB, user WB, and degradation correction, and the actual data being sent to the ASTRA are output.
- Detection of V frequency: The V signal input to the panel is measured in the range of 30.51 to 99.99 Hz. The measured value is multiplied by 100 and then output.
- Number of SUS pulses : The number is calculated from data from APL and the drive sequence. The output value must be between 0174 and 2752.
- APL value: The APL value for the input video signal (or mask indication) will be output in the range of 0000 to 1023.

F

### ■ Setting for Factory mode permission/prohibition • • • [FAY/FAN] [PFY/PFN]

The commands FAY/FAN and PFY/PFN are for prohibiting/permitting panel-adjustment commands during normal operation and are to be used to avoid accidental change of panel adjustment values.

Command Format	Operation		Remarks
	Effective Operation Modes	Control (by the microcomputer itself)	
[FAY]	Normal operation mode while the power is on	Adjustment mode: ON	Mask indications will be forcibly turned off.
[PFY]			With a PFY command, the mask does not change.
[FAN]	During FAY	Adjustment mode: OFF	
[PFN]			

- Commands that are effective during normal operation will also be effective during FAY (PFY) mode.

#### Note:

- The functions shown below will be forcibly switched when Mask ON/OFF is switched. (Even if the panel is off, changed settings will be retained.)  
While the status of Mask ON or OFF is maintained, if settings for the individual functions shown in ① and ② are changed, those settings are retained (even if the drive frequency is changed).

#### ① Functions related to picture quality

Function	Setting while Mask is ON	Setting while Mask is OFF	Remarks
Peripheral luminance correction	OFF	ON	
WB correction interlocked with APL	OFF	ON	
Streaking correction	OFF	ON	

#### ② Functions related to panel protection

Function	Setting while Mask is ON	Setting while Mask is OFF	Remarks
Detection of still picture	OFF	ON	
Detection of cracking in the panel	OFF	ON	
Scanning protection	OFF	ON	

- Depending on the type of mask displayed, phosphor burn of the panel may occur. As the panel-protection function is forcibly turned off with this model, care must be taken when color-bar signals are to be displayed for an extended period.

A

### ■ Backup function for adjustment values for the main unit • • • [FAJ/UAJ/CBU/BCP]

When the HD DIGITAL Assy is to be replaced, adjustment values can be copied from the backup EEPROM to the EEPROM of the Assy for service.

Command Format	Operation		Remarks
	Effective Operation Modes	Control (by the microcomputer itself)	
[FAJ]	During FAY	To make the flag setting that indicating that adjustment of the main unit has been completed	Writing 00 to the 4-kbyte ROM and copying to the 2-kbyte ROM
[UAJ]		To make the flag setting that indicating that adjustment of the main unit has not been completed	Writing F0 to the 4-kbyte ROM
[CBU]		To make the flag setting that indicating that backup data have not been copied	Writing F0 to the 2-kbyte ROM
[BCP]		To make the flag setting that indicating that backup data have been copied	Copying backup data

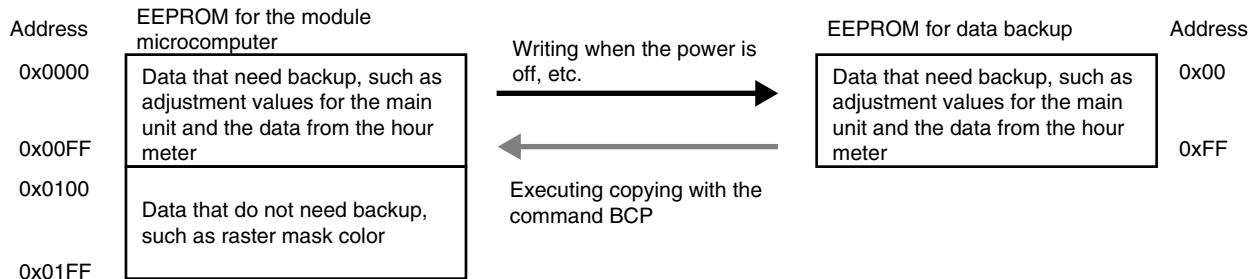
B

When the flag indicating that the line adjustments (SUS waveform, voltage margin, and panel WB) for the main unit have been completed is set to on, data stored from Addresses 0x0000 to 0X00FF in the digital EEPROM are copied to the same addresses of the backup EEPROM. Copying will be executed immediately before the relay of normal operation is off.

C

- When the command BCP is received while a warning indicating that backup copying has not been completed is displayed (conditions: main EEPROM = not adjusted, and backup EEPROM = adjusted), backed-up data will be copied to the main EEPROM, and various adjustment values related to Factory mode will be readjusted. Then LED warning indication will be shut off, and normal LED indication will be restored.
- If the backup EEPROM has not been adjusted when the command BCP is received (0x0063 is not written to all three addresses of the key data), copying of the backup data is not possible, and "XXX" is returned.

D



E

#### Note:

- When the command FAJ, UAJ, or CBU is executed, only high-order one-byte (0x00 or 0xF0) key data will be written to the EEPROM, and lower-order one-byte (0x63) data will not be changed.
- It takes at least 350 ms from reception of the command FAJ until an echo is sent back, because data are copied to the backup EEPROM.

E

### ■ Factory presetting • • • [PFS]

Command Format	Operation		Remarks
	Effective Operation Modes	Control (by the microcomputer itself)	
[PFS]	During FAY	Initialized to factory-preset values	

F

- When this command is executed, the values not stored in the EEPROM are initialized, mask indication is set to OFF, control of the power for line aging is set to OFF, and detection of the system cable is set to ON.



## 57

## ■ Conversion charts for electronic VRs: Conversion chart for the Vofs

Conversion chart for the Vofs (Commands vs. Common voltage values for the 50-inch and 43-inch models)

Command	Voltage value [V] for common sizes	Command	Voltage value [V] for common sizes	Command	Voltage value [V] for common sizes	Command	Voltage value [V] for common sizes	Command	Voltage value [V] for common sizes
VOF000	14.09	VOF056	24.55	VOF112	35.01	VOF168	45.47	VOF224	55.93
VOF001	14.28	VOF057	24.74	VOF113	35.20	VOF169	45.66	VOF225	56.12
VOF002	14.46	VOF058	24.92	VOF114	35.38	VOF170	45.85	VOF226	56.31
VOF003	14.65	VOF059	25.11	VOF115	35.57	VOF171	46.03	VOF227	56.49
VOF004	14.84	VOF060	25.30	VOF116	35.76	VOF172	46.22	VOF228	56.68
VOF005	15.02	VOF061	25.48	VOF117	35.95	VOF173	46.41	VOF229	56.87
VOF006	15.21	VOF062	25.67	VOF118	36.13	VOF174	46.59	VOF230	57.05
VOF007	15.40	VOF063	25.86	VOF119	36.32	VOF175	46.78	VOF231	57.24
VOF008	15.58	VOF064	26.04	VOF120	36.51	VOF176	46.97	VOF232	57.43
VOF009	15.77	VOF065	26.23	VOF121	36.69	VOF177	47.15	VOF233	57.61
VOF010	15.96	VOF066	26.42	VOF122	36.88	VOF178	47.34	VOF234	57.80
VOF011	16.14	VOF067	26.61	VOF123	37.07	VOF179	47.53	VOF235	57.99
VOF012	16.33	VOF068	26.79	VOF124	37.25	VOF180	47.71	VOF236	58.17
VOF013	16.52	VOF069	26.98	VOF125	37.44	VOF181	47.90	VOF237	58.36
VOF014	16.70	VOF070	27.17	VOF126	37.63	VOF182	48.09	VOF238	58.55
VOF015	16.89	VOF071	27.35	VOF127	37.81	VOF183	48.27	VOF239	58.73
VOF016	17.08	VOF072	27.54	VOF128	38.00	VOF184	48.46	VOF240	58.92
VOF017	17.27	VOF073	27.73	VOF129	38.19	VOF185	48.65	VOF241	59.11
VOF018	17.45	VOF074	27.91	VOF130	38.37	VOF186	48.83	VOF242	59.30
VOF019	17.64	VOF075	28.10	VOF131	38.56	VOF187	49.02	VOF243	59.48
VOF020	17.83	VOF076	28.29	VOF132	38.75	VOF188	49.21	VOF244	59.67
VOF021	18.01	VOF077	28.47	VOF133	38.93	VOF189	49.39	VOF245	59.86
VOF022	18.20	VOF078	28.66	VOF134	39.12	VOF190	49.58	VOF246	60.04
VOF023	18.39	VOF079	28.85	VOF135	39.31	VOF191	49.77	VOF247	60.23
VOF024	18.57	VOF080	29.03	VOF136	39.49	VOF192	49.96	VOF248	60.42
VOF025	18.76	VOF081	29.22	VOF137	39.68	VOF193	50.14	VOF249	60.60
VOF026	18.95	VOF082	29.41	VOF138	39.87	VOF194	50.33	VOF250	60.79
VOF027	19.13	VOF083	29.59	VOF139	40.05	VOF195	50.52	VOF251	60.98
VOF028	19.32	VOF084	29.78	VOF140	40.24	VOF196	50.70	VOF252	61.16
VOF029	19.51	VOF085	29.97	VOF141	40.43	VOF197	50.89	VOF253	61.35
VOF030	19.69	VOF086	30.15	VOF142	40.62	VOF198	51.08	VOF254	61.54
VOF031	19.88	VOF087	30.34	VOF143	40.80	VOF199	51.26	VOF255	61.72
VOF032	20.07	VOF088	30.53	VOF144	40.99	VOF200	51.45		
VOF033	20.25	VOF089	30.71	VOF145	41.18	VOF201	51.64		
VOF034	20.44	VOF090	30.90	VOF146	41.36	VOF202	51.82		
VOF035	20.63	VOF091	31.09	VOF147	41.55	VOF203	52.01		
VOF036	20.81	VOF092	31.28	VOF148	41.74	VOF204	52.20		
VOF037	21.00	VOF093	31.46	VOF149	41.92	VOF205	52.38		
VOF038	21.19	VOF094	31.65	VOF150	42.11	VOF206	52.57		
VOF039	21.37	VOF095	31.84	VOF151	42.30	VOF207	52.76		
VOF040	21.56	VOF096	32.02	VOF152	42.48	VOF208	52.94		
VOF041	21.75	VOF097	32.21	VOF153	42.67	VOF209	53.13		
VOF042	21.94	VOF098	32.40	VOF154	42.86	VOF210	53.32		
VOF043	22.12	VOF099	32.58	VOF155	43.04	VOF211	53.50		
VOF044	22.31	VOF100	32.77	VOF156	43.23	VOF212	53.69		
VOF045	22.50	VOF101	32.96	VOF157	43.42	VOF213	53.88		
VOF046	22.68	VOF102	33.14	VOF158	43.60	VOF214	54.06		
VOF047	22.87	VOF103	33.33	VOF159	43.79	VOF215	54.25		
VOF048	23.06	VOF104	33.52	VOF160	43.98	VOF216	54.44		
VOF049	23.24	VOF105	33.70	VOF161	44.16	VOF217	54.63		
VOF050	23.43	VOF106	33.89	VOF162	44.35	VOF218	54.81		
VOF051	23.62	VOF107	34.08	VOF163	44.54	VOF219	55.00		
VOF052	23.80	VOF108	34.26	VOF164	44.72	VOF220	55.19		
VOF053	23.99	VOF109	34.45	VOF165	44.91	VOF221	55.37		
VOF054	24.18	VOF110	34.64	VOF166	45.10	VOF222	55.56		
VOF055	24.36	VOF111	34.82	VOF167	45.29	VOF223	55.75		

## ■ Conversion charts for electronic VRs: Conversion chart for the Vyprst (1/2)

Conversion chart for the Vyprst (Commands vs. Voltage values for the 50-inch and 43-inch models)								
Command	Voltage [V]		Command	Voltage [V]		Command	Voltage [V]	
	50-inch Model	43-inch Model		50-inch Model	43-inch Model		50-inch Model	43-inch Model
VRP000	246.3	236.3	VRP056	270.6	260.6	VRP112	294.9	284.9
VRP001	246.7	236.7	VRP057	271.0	261.0	VRP113	295.4	285.4
VRP002	247.1	237.1	VRP058	271.5	261.5	VRP114	295.8	285.8
VRP003	247.6	237.6	VRP059	271.9	261.9	VRP115	296.2	286.2
VRP004	248.0	238.0	VRP060	272.3	262.3	VRP116	296.7	286.7
VRP005	248.4	238.4	VRP061	272.8	262.8	VRP117	297.1	287.1
VRP006	248.9	238.9	VRP062	273.2	263.2	VRP118	297.5	287.5
VRP007	249.3	239.3	VRP063	273.6	263.6	VRP119	298.0	288.0
VRP008	249.7	239.7	VRP064	274.1	264.1	VRP120	298.4	288.4
VRP009	250.2	240.2	VRP065	274.5	264.5	VRP121	298.8	288.8
VRP010	250.6	240.6	VRP066	274.9	264.9	VRP122	299.3	289.3
VRP011	251.0	241.0	VRP067	275.4	265.4	VRP123	299.7	289.7
VRP012	251.5	241.5	VRP068	275.8	265.8	VRP124	300.1	290.1
VRP013	251.9	241.9	VRP069	276.2	266.2	VRP125	300.6	290.6
VRP014	252.4	242.4	VRP070	276.7	266.7	VRP126	301.0	291.0
VRP015	252.8	242.8	VRP071	277.1	267.1	VRP127	301.4	291.4
VRP016	253.2	243.2	VRP072	277.5	267.5	VRP128	301.9	291.9
VRP017	253.7	243.7	VRP073	278.0	268.0	VRP129	302.3	292.3
VRP018	254.1	244.1	VRP074	278.4	268.4	VRP130	302.7	292.7
VRP019	254.5	244.5	VRP075	278.9	268.9	VRP131	303.2	293.2
VRP020	255.0	245.0	VRP076	279.3	269.3	VRP132	303.6	293.6
VRP021	255.4	245.4	VRP077	279.7	269.7	VRP133	304.0	294.0
VRP022	255.8	245.8	VRP078	280.2	270.2	VRP134	304.5	294.5
VRP023	256.3	246.3	VRP079	280.6	270.6	VRP135	304.9	294.9
VRP024	256.7	246.7	VRP080	281.0	271.0	VRP136	305.3	295.3
VRP025	257.1	247.1	VRP081	281.5	271.5	VRP137	305.8	295.8
VRP026	257.6	247.6	VRP082	281.9	271.9	VRP138	306.2	296.2
VRP027	258.0	248.0	VRP083	282.3	272.3	VRP139	306.7	296.7
VRP028	258.4	248.4	VRP084	282.8	272.8	VRP140	307.1	297.1
VRP029	258.9	248.9	VRP085	283.2	273.2	VRP141	307.5	297.5
VRP030	259.3	249.3	VRP086	283.6	273.6	VRP142	308.0	298.0
VRP031	259.7	249.7	VRP087	284.1	274.1	VRP143	308.4	298.4
VRP032	260.2	250.2	VRP088	284.5	274.5	VRP144	308.8	298.8
VRP033	260.6	250.6	VRP089	284.9	274.9	VRP145	309.3	299.3
VRP034	261.0	251.0	VRP090	285.4	275.4	VRP146	309.7	299.7
VRP035	261.5	251.5	VRP091	285.8	275.8	VRP147	310.1	300.1
VRP036	261.9	251.9	VRP092	286.2	276.2	VRP148	310.6	300.6
VRP037	262.3	252.3	VRP093	286.7	276.7	VRP149	311.0	301.0
VRP038	262.8	252.8	VRP094	287.1	277.1	VRP150	311.4	301.4
VRP039	263.2	253.2	VRP095	287.5	277.5	VRP151	311.9	301.9
VRP040	263.6	253.6	VRP096	288.0	278.0	VRP152	312.3	302.3
VRP041	264.1	254.1	VRP097	288.4	278.4	VRP153	312.7	302.7
VRP042	264.5	254.5	VRP098	288.8	278.8	VRP154	313.2	303.2
VRP043	264.9	254.9	VRP099	289.3	279.3	VRP155	313.6	303.6
VRP044	265.4	255.4	VRP100	289.7	279.7	VRP156	314.0	304.0
VRP045	265.8	255.8	VRP101	290.1	280.1	VRP157	314.5	304.5
VRP046	266.3	256.3	VRP102	290.6	280.6	VRP158	314.9	304.9
VRP047	266.7	256.7	VRP103	291.0	281.0	VRP159	315.3	305.3
VRP048	267.1	257.1	VRP104	291.4	281.4	VRP160	315.8	305.8
VRP049	267.6	257.6	VRP105	291.9	281.9	VRP161	316.2	306.2
VRP050	268.0	258.0	VRP106	292.3	282.3	VRP162	316.6	306.6
VRP051	268.4	258.4	VRP107	292.8	282.8	VRP163	317.1	307.1
VRP052	268.9	258.9	VRP108	293.2	283.2	VRP164	317.5	307.5
VRP053	269.3	259.3	VRP109	293.6	283.6	VRP165	317.9	307.9
VRP054	269.7	259.7	VRP110	294.1	284.1	VRP166	318.4	308.4
VRP055	270.2	260.2	VRP111	294.5	284.5	VRP167	318.8	308.8

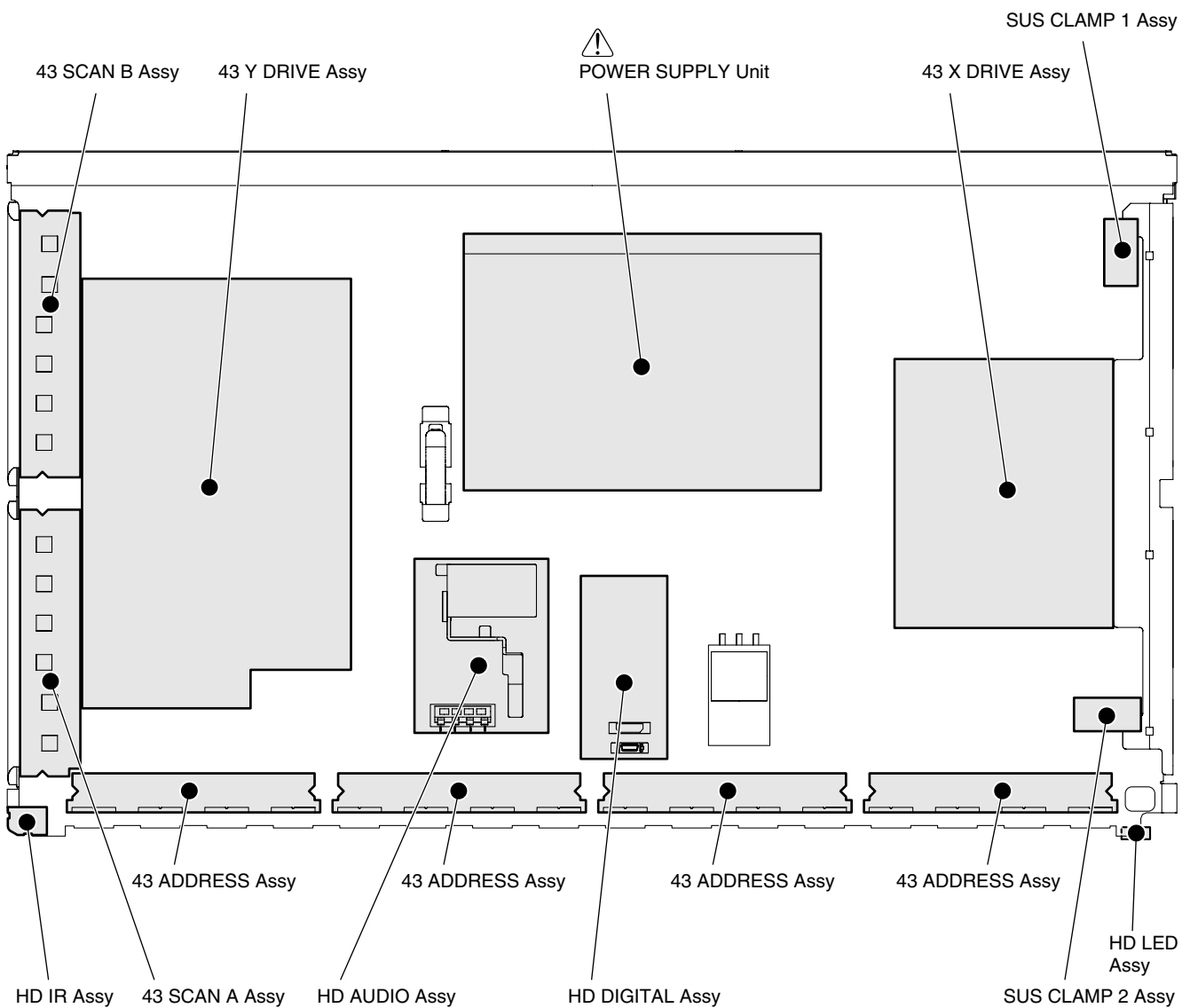
## ■ Conversion charts for electronic VRs: Conversion chart for the Vyprst (2/2)

Conversion chart for the Vyprst (Commands vs. Voltage values for the 50-inch and 43-inch models)					
Command	Voltage [V]		Command	Voltage [V]	
	50-inch Model	43-inch Model		50-inch Model	43-inch Model
VRP168	319.2	309.2	VRP224	343.6	333.6
VRP169	319.7	309.7	VRP225	344.0	334.0
VRP170	320.1	310.1	VRP226	344.4	334.4
VRP171	320.6	310.6	VRP227	344.9	334.9
VRP172	321.0	311.0	VRP228	345.3	335.3
VRP173	321.4	311.4	VRP229	345.7	335.7
VRP174	321.9	311.9	VRP230	346.2	336.2
VRP175	322.3	312.3	VRP231	346.6	336.6
VRP176	322.7	312.7	VRP232	347.1	337.1
VRP177	323.2	313.2	VRP233	347.5	337.5
VRP178	323.6	313.6	VRP234	347.9	337.9
VRP179	324.0	314.0	VRP235	348.4	338.4
VRP180	324.5	314.5	VRP236	348.8	338.8
VRP181	324.9	314.9	VRP237	349.2	339.2
VRP182	325.3	315.3	VRP238	349.7	339.7
VRP183	325.8	315.8	VRP239	350.1	340.1
VRP184	326.2	316.2	VRP240	350.5	340.5
VRP185	326.6	316.6	VRP241	351.0	341.0
VRP186	327.1	317.1	VRP242	351.4	341.4
VRP187	327.5	317.5	VRP243	351.8	341.8
VRP188	327.9	317.9	VRP244	352.3	342.3
VRP189	328.4	318.4	VRP245	352.7	342.7
VRP190	328.8	318.8	VRP246	353.1	343.1
VRP191	329.2	319.2	VRP247	353.6	343.6
VRP192	329.7	319.7	VRP248	354.0	344.0
VRP193	330.1	320.1	VRP249	354.4	344.4
VRP194	330.5	320.5	VRP250	354.9	344.9
VRP195	331.0	321.0	VRP251	355.3	345.3
VRP196	331.4	321.4	VRP252	355.7	345.7
VRP197	331.8	321.8	VRP253	356.2	346.2
VRP198	332.3	322.3	VRP254	356.6	346.6
VRP199	332.7	322.7	VRP255	357.0	347.0
VRP200	333.2	323.2			
VRP201	333.6	323.6			
VRP202	334.0	324.0			
VRP203	334.5	324.5			
VRP204	334.9	324.9			
VRP205	335.3	325.3			
VRP206	335.8	325.8			
VRP207	336.2	326.2			
VRP208	336.6	326.6			
VRP209	337.1	327.1			
VRP210	337.5	327.5			
VRP211	337.9	327.9			
VRP212	338.4	328.4			
VRP213	338.8	328.8			
VRP214	339.2	329.2			
VRP215	339.7	329.7			
VRP216	340.1	330.1			
VRP217	340.5	330.5			
VRP218	341.0	331.0			
VRP219	341.4	331.4			
VRP220	341.8	331.8			
VRP221	342.3	332.3			
VRP222	342.7	332.7			
VRP223	343.1	333.1			

# 7. GENERAL INFORMATION

## 7.1 DIAGNOSIS

### 7.1.1 PCB LOCATION



• Operation statuses indicated by LEDs

Status	LED Pattern			
Standby	1	Lit in Red	Blue	
			Red	
Power ON	2	Lit in Blue	Blue	
			Red	
AC Power OFF of one side	3	Red flashes (1000ms)	Blue	
			Red	1000ms
System cable disconnection	4	Red and blue flash (1000ms)	Blue	1000ms
			Red	1000ms
Power-down	5	Red flashes (500+2500ms)	Blue	Once
			Red	Twice
Shutdown	6	Blue flashes (500+2500ms)	Blue	Once
			Red	Twice
No backup copy	7	Lit in Red and blue flashes (200ms)	Blue	200ms
			Red	200ms

■ : Lit in Red LED  
■ : Lit in Blue LED

• PD (power-down) count

1	Not used
2	POWER SUPPLY Unit
3	SCAN Assy
4	5V power supply for SCAN
5	Y-DRIVE (Not used)
6	DCDC for Y drive
7	Y-SUS
8	ADDRESS Assy
9	X-DRIVE
10	DCDC for X drive
11	X-SUS
12	Not used
13	Sequence drive stop
14	Not used
15	UNKNOWN

• SD (shut down) count

1	SEQUENCE PROCESSOR (SQ_IC)
2	MDU-IIC
3	RST2 abnormality
4	Panel high temperature
5	Speaker short-circuit *

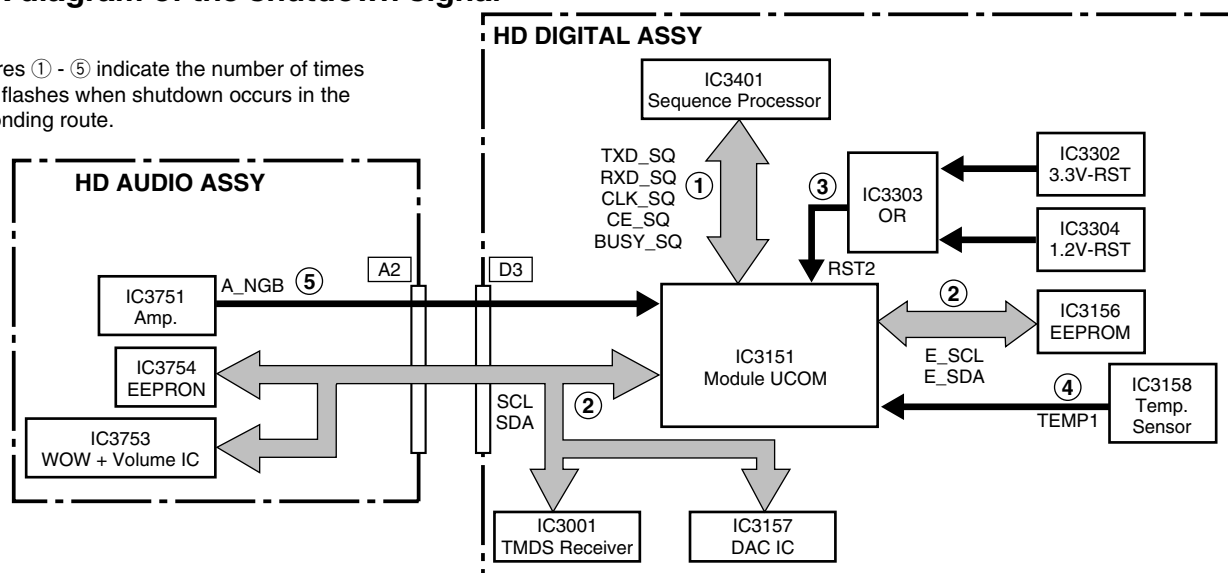
\* When a jumper (J105) between the HD AUDIO Assy and the POWER SUPPLY Unit is disconnected, the SD LED flashes five times in this manner.

- Note:**
- When a shutdown occurs, a warning will be issued by the Media Receiver and displayed, then the power will be shut off.
  - When a shutdown or power-down occurs on the Panel side, the Media Receiver will enter Standby mode (the red LED will light).

## • Block diagram of the shutdown signal

### Note:

The figures ① - ⑤ indicate the number of times the LED flashes when shutdown occurs in the corresponding route.



## • Diagnosis of shutdown

Number of flashes	SD Circuit in Operation	Defective Assy	Reason for Shutdown	Point to be Checked	Possible Defective Part	Remarks
1 time	Communication failure of the driving processor	HD DIGITAL	Communication failure of IC3401	SQ ASIC BLOCK, PANEL FLASH BLOCK	IC3401, IC3301	
			Writing failure of IC3401			Check if version data can be read, using the "GS1" command, after the power is turned on again.
2 times	Communication failure of the IIC line (Check the SD subcategory on the Factory Menu.)	HD DIGITAL	Communication failure of the EEPROM (for retaining 4-Kbyte of data)	MODULE UCOM BLOCK	IC3156, IC3157	
		HD AUDIO	Communication failure of the EEPROM (2-kbyte : for backup)	TMD5 BLOCK	IC3001	
			Disconnection of connectors	AUDIO AMP BLOCK	IC3754	
			Defective volume IC	A2 - D3		Check if the connectors are disconnected or are not connected securely.
			Defective volume IC	HD AUDIO Assy	IC3753	
3 times	Power failure of the driving processor (RST2)	HD DIGITAL	Defective DC-DC converter	DIGITAL DD CON BLOCK	U3601	Check if 3.3-V and 1.2-V power supplies are activated.
			Defective RST IC	PANEL FLASH BLOCK	IC3302 - IC3304	
			Defective IC3401	SQ ASIC BLOCK	IC3401	
		POWER SUPPLY	The 8-V power supply is not activated.			Check if the 8-V power is supplied at Pin 1 of the D11 connector.
4 times	Abnormally high temperature of the panel		Abnormally high temperature of the panel	Ambient temperature		The Panel will be shut down if the sensor detects temperature of 75°C or higher (for the PDP-436P/-506P).
5 times	Audio failure		Speakers' grounding fault	Speaker terminals		Check if the speaker cables are in contact with the chassis, etc.
		HD AUDIO	Defective AMP IC	HD AUDIO Assy	IC3751	
		HD AUDIO	Disconnection of connectors	A1 - P5		Check if the connectors are disconnected or are not connected securely.

7.1.3 DIAGNOSIS OF PD (POWER-DOWN)

• Power-down diagnosis (defective points)

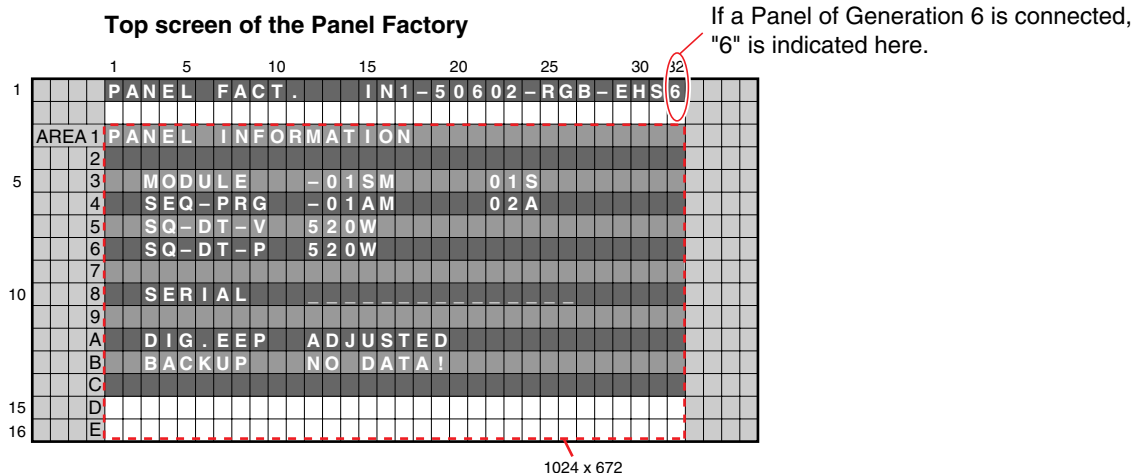
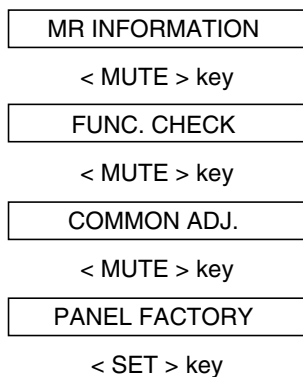
Number of Blinks	PD Circuit in Operation	Defective PCB Assy	Reason for PD (Power-down)	Point to be Checked	Possible Defective Part	Remarks
2	POWER	POWER SUPPLY				
		50 (43) SCAN A, B		SCAN IC	SCAN IC	VH-GNDH short-circuit
3	SCAN	50 (43) Y DRIVE	VH UVP	Y SUS BLOCK	IC2252, IC2253	VSUS-SUSOUT, SUSOUT-SUSGND short-circuit
			Disconnection of cable detected	VH DC/DC	IC2502, L2501	
		50 (43) X DRIVE	VH UVP	IC1202	IC1202	VSUS-SUSOUT, SUSOUT-SUSGND short-circuit
		50 (43) SCAN A, B	Disconnection of cable detected	CN2401, CN2402		
4	SCN-5V	50 (43) Y DRIVE	IC5V UVP	SCAN IC	SCAN IC	
			IC5V DC/DC	Q2605, R2647		
6	Y-DCDC	50 (43) Y DRIVE	VOFS UVP	Y SUS BLOCK	R2352	
				VOFS DC/DC	Q2606, R2619, R2620	
			Vprst UVP	Y SUS BLOCK	IC2252, IC2253, Q2280, Q2281	MSKS-SUSOUT short-circuit
7	Y-SUS	50 (43) Y DRIVE	Power-down caused by detection of middle-point voltage	Vprst Regulator	Q2531, Q2532, IC2535	
				Y RESONANCE BLOCK	IC2101	
8	ADRS	50 (43) ADDRESS	Address power-down	Y SUS BLOCK	Q2221	
			Disconnection of cable detected	ADDRESS RESONANCE BLOCK	D1634	V+ADR-GND_ADR short-circuit
9	XDRIVE	50 (43) X DRIVE	Disconnection of cable detected	CN1501, CN3501-CN3504		
			Disconnection of cable detected	CN1001		
10	X-DCDC	50 (43) X DRIVE	Disconnection of cable detected	CN1201		
			VRN UVP	VRN DC/DC	Q1323, R1332, R1333	
11	X-SUS	50 (43) X DRIVE	Power-down caused by detection of middle-point voltage	X SUS BLOCK	R1204, Q1272	
				X RESONANCE BLOCK	IC1101	

OVP : OVER VOLTAGE PROTECT  
UVP : UNDER VOLTAGE PROTECT



## 7.1.4 OVERVIEW OF PANEL FACTORY MODE

### ■ Top screen of the Factory Menu for the main unit



**Note:** With this model, the structure of Factory mode has been changed, and all items related to the Panel are gathered into PANEL FACTORY mode.

**Note:** On-screen displays in Factory mode are indicated in white characters on a green background for the PDP-506HD/436HD and subsequent models.

# A ■ Configuration of Panel Factory mode

No.	Submode Name		Adjustable Range	Remarks
	Submode Items			
1	PANEL INFORMATION			
2	PANEL WORKS			
3	POWER DOWN			
4	SHUT DOWN			
5	PANEL-1 ADJ (+)			
5-1		X-SUS B <=>	120 to 136	Equivalent to XSB
5-2		Y-SUS B <=>	120 to 136	Equivalent to YSB
5-3		Y-SUSTAIL T <=>	120 to 136	Equivalent to YTG
5-4		Y-SUSTAIL W <=>	120 to 136	Equivalent to YTW
5-5		XY-RST W <=>	120 to 136	Equivalent to RSW
5-6		VOL SUS <=>	000 to 255	Equivalent to VSU
5-7		VOL OFFSET <=>	000 to 255	Equivalent to VOF
5-8		VOL RST P <=>	000 to 255	Equivalent to VRP
5-9		SUS FREQ. <=>	MODE1 to MODE8	Equivalent to SFR
6	PANEL-2 ADJ (+)			
6-1		R-HIGH <=>	000 to 511	Equivalent to PRH
6-2		G-HIGH <=>	000 to 511	Equivalent to PGH
6-3		B-HIGH <=>	000 to 511	Equivalent to PBH
6-4		R-LOW <=>	000 to 999	Equivalent to PRL
6-5		G-LOW <=>	000 to 999	Equivalent to PGL
6-6		B-LOW <=>	000 to 999	Equivalent to PBL
6-7		ABL <=>	000 to 255	Equivalent to ABL
7	PANEL REVISE			
7-1		R-LEVEL <=>	LV-0 to LV-7	Equivalent to RRL
7-2		G-LEVEL <=>	LV-0 to LV-7	Equivalent to RGL
7-3		B-LEVEL <=>	LV-0 to LV-7	Equivalent to RBL
8	ETC (+)			
8-1		BACKUP DATA <=>	NO OPRT<=>TRANSFER or ERR	Equivalent to BCP
8-2		DIGITAL EEPROM <=>	NO OPRT<=>DELETE/REPAIR	Equivalent to FAJ/UAJ
8-3		PD INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CPD
8-4		SD INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CSD
8-5		HR-MTR INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CHM
8-6		PM/B1-B5 <=>	NO OPRT <=>CLEAR	Equivalent to CPM
8-7		P-COUNT INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CPC
9	MASK SETUP (+)			
9-1		MASK OFF		Equivalent to MKS+S00
9-2		SGL MASK 01 <=>	<=>V48<=>V50<=>V60<=>P60<=>P70<=>V72<=>V75<=> (Select each sequence.)	Equivalent to MKS+S01
9-3		SGL MASK 02 <=>		Equivalent to MKS+S02
		•••		•••
9-62		CMB MASK 08 <=>		Equivalent to MKC+S08
9-63		CMB MASK 09 <=>		Equivalent to MKC+S09

F

## ■ Details on submodes related to the panel

The GUI display examples here are those displayed when the main unit is used with the 50-inch model.

### 1. PANEL INFORMATION

	1	5	10	15	20	25	30	32
1	P	A	N	E	L	F	A	C
5								
10								
15								
16								

#### ■ Key operation

- <DOWN> : Shifting to PANEL WORKS
- <UP> : Shifting to MASK SETUP (+)
- <SEL> : MASK ON/OFF
- <L/R> : Updating displayed information

The version of the microcomputer of the panel, serial number of the main unit, adjustment values of the main unit, and backup status are displayed.

### 2. PANEL WORKS

#### Note:

Screen display " PANEL\_FACT.\_\_\_\_IN1-50602-RGB-EHS6".  
Refer to service manual of Media Receiver.

	1	5	10	15	20	25	30	32
1	P	A	N	E	L	F	A	C
5								
10								
15								
16								

#### ■ Key operation

- <DOWN> : Shifting to POWER DOWN
- <UP> : Shifting to PANEL INFORMATION
- <SEL> : MASK ON/OFF
- <L/R> : Updating displayed information

- The data from the pulse meter for each block from PM-B1 to PM-B5 are indicated. The values stored in the EEPROM (3 bytes each) are each converted into a decimal number, and the higher-order 8 digits are displayed (that means that the lowest-order digit represents millions).
- TEMP1: Indicates the temperature of the panel. By your pressing the L or R key, the temperature value can be updated.

A

### 3. POWER DOWN

	1	5	10	15	20	25	30	32
1	PANEL	FACT.		IN1-50602-RGB-EHS6				
	POWER	DOWN				000124H	23M	
	1ST		2ND					
5	1	X-DRV	-----		000124H	21M		
	2	Y-SUS	SQ-NON		000115H	05M		
	3	SCAN	-----		000107H	53M		
	4	POWER	SQ-NON		000098H	47M		
10	5	ADRS-	-----		000051H	30M		
	6	SCN5V	X-SUS-		000022H	21M		
	7	SQ-NON	-----		000000H	57M		
	8							
15								
16								

#### ■ Key operation

- <DOWN> : Shifting to SHUTDOWN
- <UP> : Shifting to PANEL WORKS
- <SEL> : MASK ON/OFF
- <L/R> : Updating displayed information

- Basically, data acquired with the command QPD are displayed in the columns "1ST" and "2ND, with the values from the hour meter when the power-down occurred.

#### <Causes of power-down and corresponding OSD indications>

Cause of power-down	OSD Indication	Cause of power-down	OSD Indication
POWER SUPPLY Unit	P-PWR	ADDRESS Assy	ADRS
SCAN Assy	SCAN	X-DRIVE Assy	X-DRV
5V power for SCAN	SCN5V	DCDC for X drive	X-DCDC
Not used		X-SUS	X-SUS
DCDC for Y drive	Y-DCDC	Sequence drive stopped	SQ-NON
Y-SUS	Y-SUS	Specification inability	UNKNOWN

### 4. SHUT DOWN

	1	5	10	15	20	25	30	32
1	PANEL	FACT.		IN1-50602-RGB-EHS6				
	SHUT	DOWN				000124H	23M	
	MAIN		SUB					
5	1	TEMP1	-----		000124H	21M		
	2	AUDIO	-----		000115H	05M		
	3	MD-IIC	EEPROM		000107H	53M		
	4	SQ-IC	-----		000098H	47M		
10	5	MD-IIC	VOL IC		000051H	30M		
	6							
	7							
	8							
15								
16								

#### ■ Key operation

- <DOWN> : Shifting to PANEL-2ADJ (+)
- <UP> : Shifting to POWER DOWN
- <SEL> : MASK ON/OFF
- <L/R> : Updating displayed information

- Basically, data acquired with the command QSD (for MDU-IIC, subcategory data are also displayed) are displayed with the values from the hour meter when the shutdown occurred.

#### <Causes of shutdown and corresponding OSD indications>

Cause of shutdown (main)	OSD Indication	Cause of shutdown (sub)	OSD Indication
SEQUENCE PROCESSOR	SQ-IC	EEPROM	EEPROM (IC3156)
MDU-IIC	MDU-IIC (with subcategory)	BACKUP	BACKUP (IC3754)
Abnormality in RST2	RST2	DAC	DAC (IC3302 to IC3304)
Panel having high temperature	TEMP1	Audio IC	VOL-IC (IC3158)
Short-circuited speaker	AUDIO	DVI	DVI

## 5. PANEL-1 ADJ

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	[TBL1/60VS]																															
5																																
10																																
15	PANEL-1 ADJ (+)																															
16																																

### ■ Key operation

- <DOWN> : Shifting to PANEL-2 ADJ (+)
- <UP> : Shifting to POWER DOWN
- <SET> : Shifting to the next nested layer
- <SEL> : MASK ON/OFF

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	PANEL-1 ADJ [TBL1/60VS]																															
5																																
10																																
15	X-SUS-B <=> : 128																															
16																																

### ■ Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment value
- <LEFT> : Subtracting by one from the adjustment value
- <VOL+> : Adding by 10 to the adjustment value
- <VOL-> : Subtracting by 10 from the adjustment value
- <SET> : Determining the adjustment value and shifting to the upper layer
- <SEL> : MASK ON/OFF

### <Drive-sequence indications and indications for the ABL/WB tables>

(The OSD indications are displayed at the right part of the third line for submode PANEL-1 ADJ and subsequent submodes.)

Type of WB/ABL Tables		Type of Drive Sequences					
		Standard Video/MASK ON		Nonstandard Video		PC	
TBL1		48VS		---		60PS	Not used for consumer products
TBL2		50VS		50VN		70PS	
TBL3		60VS		60VN			
TBL4		72VS	Only Mask indication	---			
		75VS		75VN			

### <Lower-layer items of PANEL-1 ADJ>

No.	Items	Adjustment/Setting Value	Remarks
1	X-SUS B <=>	120 to 136	Equivalent to XSB
2	Y-SUS B <=>	120 to 136	Equivalent to YSB
3	Y-SUSTAIL T <=>	120 to 136	Equivalent to YTG
4	Y-SUSTAIL W <=>	120 to 136	Equivalent to YTW
5	XY-RST W <=>	120 to 136	Equivalent to RSW
6	VOL SUS <=>	000 to 255	Equivalent to VSU
7	VOL OFFSET <=>	000 to 255	Equivalent to VOF
8	VOL RST P <=>	000 to 255	Equivalent to VRP
9	SUS FREQ. <=>	<=>MODE1 to MODE8<=>	Equivalent to SFR

A

## 6. PANEL-2 ADJ

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	[TBL1/60VS]																															
5																																
10																																
15	PANEL-2 ADJ (+)																															
16																																

### ■ Key operation

- <DOWN> : Shifting to PANEL REVISE
- <UP> : Shifting to PANEL-1 ADJ (+)
- <SEL> : MASK ON/OFF
- <SET> : Shifting to the next nested layer

B

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	PANEL-2 ADJ [TBL1/60VS]																															
5																																
10																																
15	R-HIGH <=> : 256																															
16																																

### ■ Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment value
- <LEFT> : Subtracting by one from the adjustment value
- <VOL+> : Adding by 10 to the adjustment value
- <VOL-> : Subtracting by 10 from the adjustment value
- <SET> : Determining the adjustment value and shifting to the upper layer
- <SEL> : MASK ON/OFF

C

D

### <Lower-layer items of PANEL-2 ADJ>

No.	Items	Adjustment/Setting Value	Remarks
1	R-HIGH <=>	000 to 511	Equivalent to PRH
2	G-HIGH <=>	000 to 511	Equivalent to PGH
3	B-HIGH <=>	000 to 511	Equivalent to PBH
4	R-LOW <=>	000 to 999	Equivalent to PRL
5	G-LOW <=>	000 to 999	Equivalent to PGL
6	B-LOW <=>	000 to 999	Equivalent to PBL
7	ABL <=>	000 to 255	Equivalent to ABL

E

F

## 7. PANEL REVISE

	1	5	10	15	20	25	30	32																								
1	PANEL FACT . IN 1 - 5 0 6 0 2 - RGB - EHS 6																															
	[ TBL 1 / 6 0 V S ]																															
5																																
10																																
15	PANEL REVISE ( + )																															
16																																

### ■ Key operation

- <DOWN> : Shifting to ETC.(+)
- <UP> : Shifting to PANEL-2 ADJ (+)
- <SEL> : MASK ON/OFF
- <SET> : Shifting to the next nested layer

	1	5	10	15	20	25	30	32																								
1	PANEL FACT . IN1-50602-RGB-EHS6																															
	PANEL REVISE [TBL1/60VS]																															
5																																
10																																
15	R-LEVEL <=> :LV-0																															
16																																

### ■ Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment value
- <LEFT> : Subtracting by one from the adjustment value
- <VOL+> : Adding by 10 to the adjustment value
- <VOL-> : Subtracting by 10 from the adjustment value
- <SET> : Determining the setting value and shifting to the upper layer
- <SEL> : MASK ON/OFF

### <Lower-layer items of PANEL REVISE>

No.	Items	Adjustment/Setting Value	Remarks
1	R-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RRL
2	G-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RGL
3	B-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RBL

## 8. ETC.

	1	5	10	15	20	25	30	32
1	PANEL	FACT.	IN1-50602-RGB-EHS6					
5								
10								
15								
16	ETC.	(+)						

### Key operation

- <DOWN> : Shifting to MASK SETUP (+)
- <UP> : Shifting to PANEL REVISE (+)
- <SEL> : MASK ON/OFF
- <SET> : Shifting to the next nested layer

	1	5	10	15	20	25	30	32
1	PANEL	FACT.	IN1-50602-RGB-EHS6					
5	ETC.							
10								
15								
16	BACKUP	EEPROM	<=>					

### Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment value
- <LEFT> : Subtracting by one from the adjustment value
- <SET> : Determining the setting value and shifting to the upper layer
- <SEL> : MASK ON/OFF

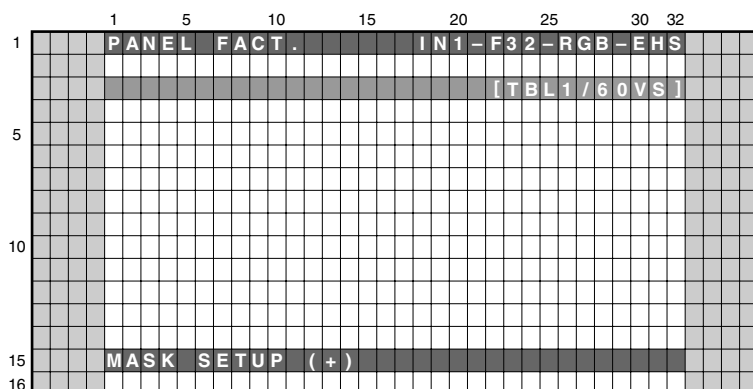
### <Lower-layer items of ETC.>

No.	Items	Adjustment/Setting Value	Remarks
1	BACKUP DATA <=>	<=>NO OPRT<=>TRANSFER<=>	"ERR" is indicated when no data are in the backup EEPROM. To activate the option to select TRANSFER, press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
2	DIGITAL EEPROM <=>	<=>NO OPRT<=>REPAIR/DELETE<=>	"DELETE" is indicated when the main unit has been already adjusted. To activate the option to select REPAIR/DELETE, press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
3	PD INFO. <=>	<=>NO OPRT<=>CLEAR<=>	To activate the option to select CLEAR, repeatedly press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
4	SD INFO. <=>	<=>NO OPRT<=>CLEAR<=>	
5	HR-MTR INFO. <=>	<=>NO OPRT<=>CLEAR<=>	
6	PM/B1-B5 <=>	<=>NO OPRT<=>CLEAR<=>	
7	P-COUNT INFO. <=>	<=>NO OPRT<=>CLEAR<=>	

- "NO OPRT" is selected when this submode is entered (to avoid accidental misoperation).
- When each item is set, the process starts then the unit shifts to the upper layer. (When NO OPRT is determined, the unit will shift to the upper layer without doing anything.)
- When data are set to be backed up, if the digital EEPROM has not been adjusted, do the operation of LED pattern No. 7.



## 9. MASK SETUP



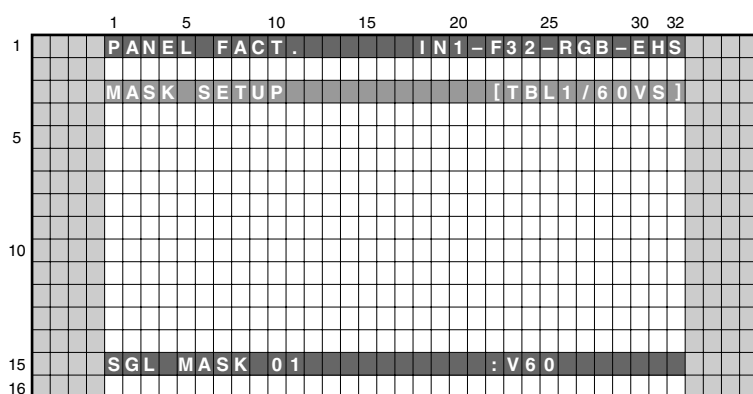
### ■ Key operation

<DOWN> : Shifting to PANEL INFORMATION

<UP> : Shifting to ETC. (+)

<SEL> : MASK ON/OFF

<SET> : Shifting to the next nested layer



### ■ Key operation

<DOWN> : Shifting to the next MASK

<UP> : Shifting to the previous MASK

<RIGHT> : Changing MASK sequence (+)

<LEFT> : Changing MASK sequence (-)

<SET> : Determining the setting value and shifting to the upper layer

<SEL> : MASK ON/OFF

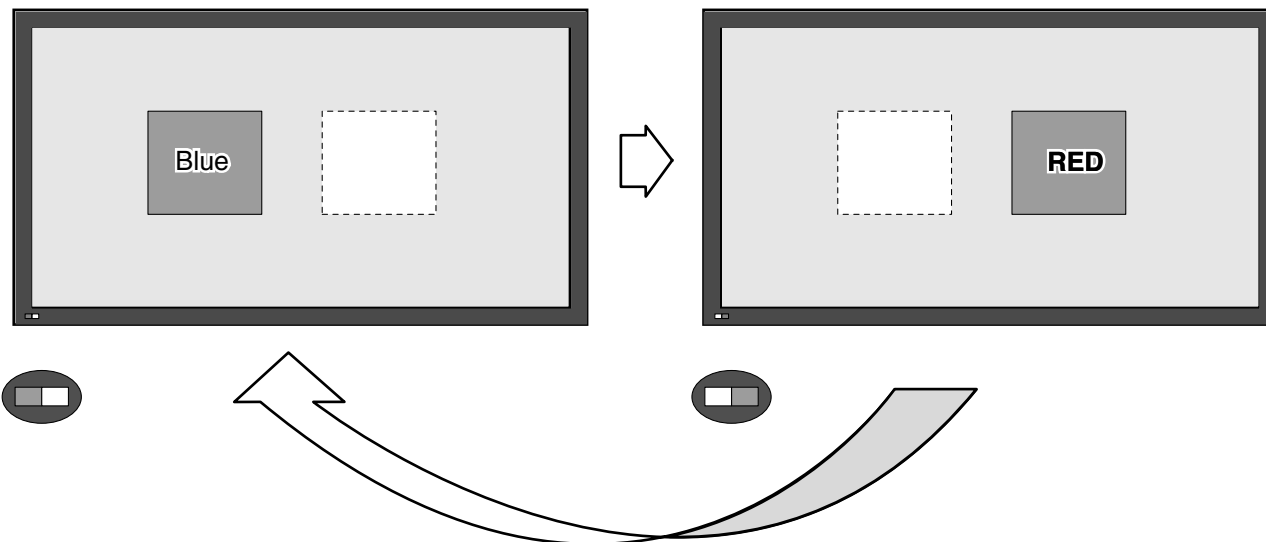
### <Lower-layer items of MASK SETUP>

No.	Items	Adjustment/Setting Value	Remarks
1	MASK OFF		Equivalent to MKS+S00
2	SGL MASK 01 <=>		Equivalent to MKS+S01
3	SGL MASK 02 <=>		Equivalent to MKS+S02
4	...	<=>48V<=>50V<=>60V<=> 60P<=>70P<=>72V<=>75V<=>	...
5	CMB MASK 09 <=>		Equivalent to MKC+S08
6	CMB MASK 10 <=>		Equivalent to MKC+S09

- With the keys <LEFT> and <RIGHT>, the Panel drive sequence in the MASK indication is changed in the following way:  
 <=>48V<=>50V<=>60V<=>72V<=>75V<=>60P<=>70P<=>

## 7.1.5 OPERATION WHEN THE MEDIA RECEIVER IS NOT CONNECTED

As the connection conditions of the system cables (MDR cable, DVI cable) are usually detected, if no connection, such as cable disconnection, is detected, a warning indication (alternate flashing of the red and blue areas) is displayed on the mask screen, and the red and green LEDs flash alternately. Then after about 30 seconds, the power is automatically turned off.



Alternate flashing at intervals of about 1 second

To operate the panel without the Media Receiver, there are the following two ways:

### 1. Operation-without-the-Media-Receiver mode

Input the "SYS S00" RS232C command. The status of the LEDs changes to that in normal operation mode.

**Note:** Turning the AC switch to OFF then ON also maintains this mode. However, once the unit is connected with the Media Receiver using the System cable, this mode is automatically canceled.

### 2. DVI mode

Turn the unit on while DVI SG signals are being input with only the DVI connector connected. After a warning is displayed for about 5 seconds, the unit is ready to display the screen of the input signal. (Blue LED lit)

**Notes:** • Although the output from XGA (43 inch) and WXGA (50 inch) can be input to the unit, this is not a mode open to general users. (With some signals, errors such as power-down may occur.)

## 7.1.6 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM

**Function:** To prevent a power-down from being generated, operation of only the digital-signal processing and audio circuits are enabled, and power is not supplied to the panel driving system (large-signal system).

**Usages:**

1. In a case where a check is required of signals' being correctly output to the driving systems during a repair, etc.
2. In a case where diagnosis is required for judging whether the power to the large-signal system or small-signal system has been down when a power-down occurred

**Methods:**

1. Short-circuit the points (see Fig. 4 below) on the face and on the reverse side of the HD DIGITAL Assy.
2. Issue the "DRV S00" RS-232C command. (Command for turning the function off: DRV S01)

**Notes:**

- When the power to the large-signal system is off, as the PD signal is muted, power-downs other than PS\_PD are not activated.
- As soon as the clips are removed while the power to the large-signal system is off, a power-down will occur. Be sure to turn the power off before removing the clips.
- While this function is activated with RS-232C commands, it is possible to issue "DRV S01" (for turning the function off) while the power is on. However, as it may damage the unit, turn the power off before issuing the "DRV S01" command.
- Although the "DRV S00/S01" RS-232C commands are valid during Standby mode, once the main power is turned off, the unit will return to "DRV S01."

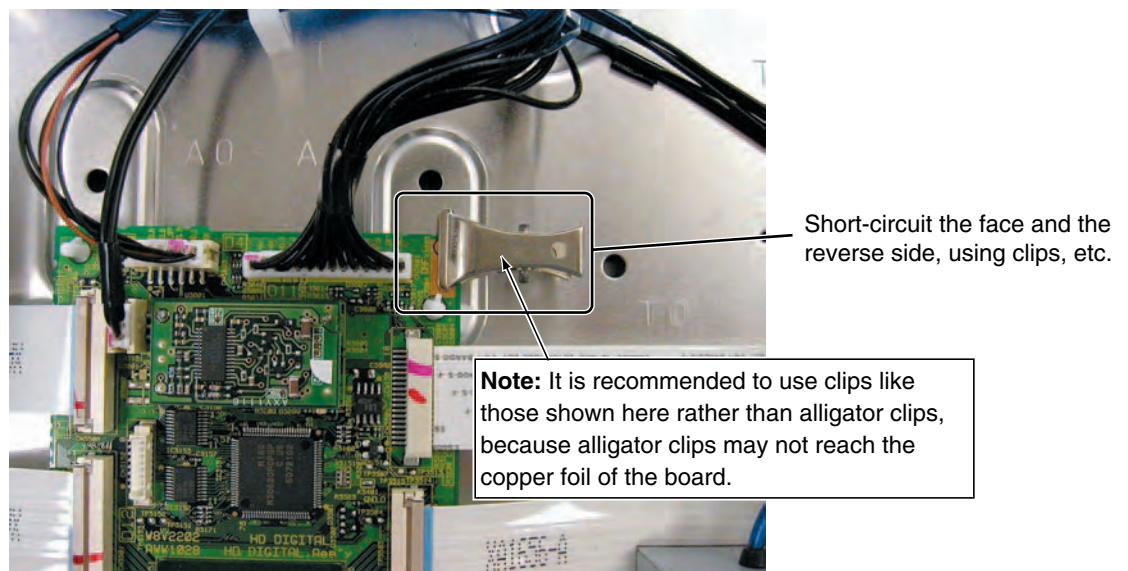


Fig. 4 Position of DRIVE OFF

1 2 3 4

# 7.1.7 BACKUP WHEN THE MAIN UNIT IS ADJUSTED

## Outline

- A Adjustment data set at the factory are stored in the EEPROM (IC\*\*\*\*/4K) on the HD DIGITAL Assy. Those adjustment data are automatically backed up in the EEPROM (backup EEPROM: IC\*\*\*\*) on the HD AUDIO Assy. Therefore, even if the HD DIGITAL Assy is replaced, the adjustment data can be restored by copying the backup data, which enables you to omit newly performing adjustments on the main unit.

## Data to be backed up

- B
- Voltage margin adjustment values
  - Data on the hour meter
  - Upper limit of power-adjustment value
  - Data on the pulse meter
  - Panel WB adjustment values
  - Serial number
  - Drive waveform adjustment values
  - Data of the P-ON counter
  - PD/SD histories

## How to copy the backup data

1. When the HD DIGITAL Assy is replaced with that for service (normal servicing)  
(In a case where no data are on the DIG. EEP, and backup data have been adjusted)

Command: "BCP" (Effective during FAY)  
Factory Menu

C

PANEL INFORMATION

▼ (down)

...

▼ (down)

ETC. (+)

[set]

BACKUP DATA: NO OPRT

>> (right)

BACKUP DATA: TRANSFER

[set] (Press and hold for 5 seconds.)

D

- After the HD DIGITAL Assy is replaced with that for service, check that "DIG. EEP: NO DATA!" is displayed on the Panel Information screen of the Factory Menu.
- If this command is not executed, the red LED lights, and the blue LED flashes, to warn you that copying of the backup adjustment data for the main unit failed.
- If both the HD DIGITAL Assy and HD AUDIO Assy are to be replaced, first replace the HD AUDIO Assy and set the unit to Standby mode. Then replace the HD DIGITAL Assy.

2. In a case where a HD DIGITAL Assy that was mounted on another unit is to be reused as a service part.

Command: "FAJ" (Effective during FAY)  
Factory Menu: PANEL FACT => ETC => DIGITAL EEPROM: DELETE

E

PANEL INFORMATION

▼ (down)

...

▼ (down)

ETC. (+)

[set]

BACKUP DATA: NO OPRT

▼ (down)

DIGITAL EEPROM: NO OPRT

>> (right)

DIGITAL EEPROM: REPAIR

[set] (Press and hold for 5 seconds.)

F

- If the HD DIGITAL Assy of Unit 1 is mounted to be reused in Unit 2 to be repaired, and Unit 2 enters Standby mode, the adjustment data and histories stored in Unit 1 are erased, and those of Unit 2 are copied. Once overwritten, the original data will not be restored. After the Assy is replaced, be sure to enter Factory mode, using the remote control unit for servicing, and perform the procedures described herein. Or, before mounting an Assy to be reused as a service Assy, perform these procedures then mount it on the product to be repaired.

3. In a case where the HD DIGITAL Assy is replaced with one for servicing because of a defective EEPROM on the original Assy and manual adjustments are to be performed  
(In a case where no data are stored in the HD DIGITAL Assy or as backup, and the values that have been manually adjusted on Service Menu are to be applied as adjustment data for the main unit)

Command: "UAJ" (Effective during FAY)  
Factory Menu

PANEL INFORMATION

▼ (down)

...

▼ (down)

ETC. (+)

[set]

BACKUP DATA: NO OPRT

▼ (down)

DIGITAL EEPROM: NO OPRT

>> (right)

DIGITAL EEPROM: REPAIR

[set] (Press and hold for 5 seconds.)

- If the HD DIGITAL Assy with which adjustment data for the main unit have been copied is mounted, the above procedures are not necessary after manual adjustment.  
(The indication "DIGITAL EEPROM: REPAIR" will not be displayed.)

A

■

Clearing data on various histories when the HD DIGITAL Assy is replaced

Other than adjustment data for the main unit, data to be backed up include the accumulated power-on time and a history of defective parts, which are data updated and stored in memory. Among those data, some are required to be cleared when the HD DIGITAL Assy is replaced for servicing, as shown below:

B

Item	Backed-up data	Type of servicing			RS-232C command
		Panel replacement	Replacement of the power-supply block	Others	
Hour meter	Accumulated display	To be cleared	Not to be cleared	Not to be cleared	CHM
SD history	Point where an SD occurred and data on the hour meter	To be cleared	Not to be cleared	Not to be cleared	CSD
PD history	Point where a PD occurred and data on the hour meter	To be cleared	Not to be cleared	Not to be cleared	CPD
Pulse meter	Accumulated number of pulses of the Panel (5 blocks)	To be cleared (essential)	Not to be cleared	Not to be cleared	CPM
Accumulated number of power-ons	Accumulated number of RELAY_ONs	Not to be cleared	To be cleared (essential)	Not to be cleared	CPC

- Notes:
- 1: With the PDP-506P/436P and subsequent models, because various compensation functions use pulse-meter data for calculating compensation values, if related Assys are replaced, data on various histories must be cleared.

2: To clear data using RS-232C commands, after entering Factory mode (by sending FAY or PFY), issue a corresponding command. Otherwise, the command will not be executed.

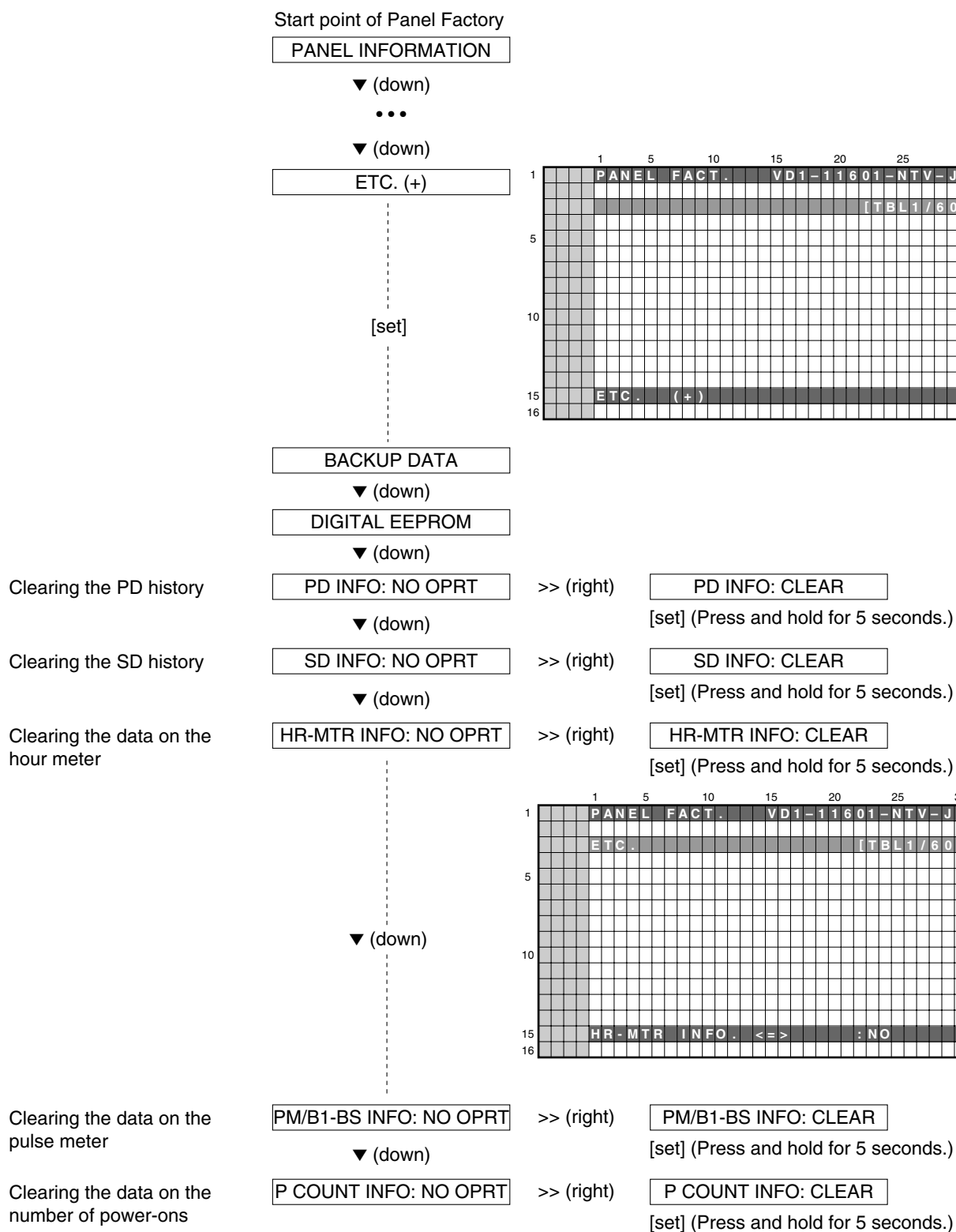
C

D

E

F

## How to clear the history for each item on the Factory Menu



## 7.1.9 DISASSEMBLY

**Note :** Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

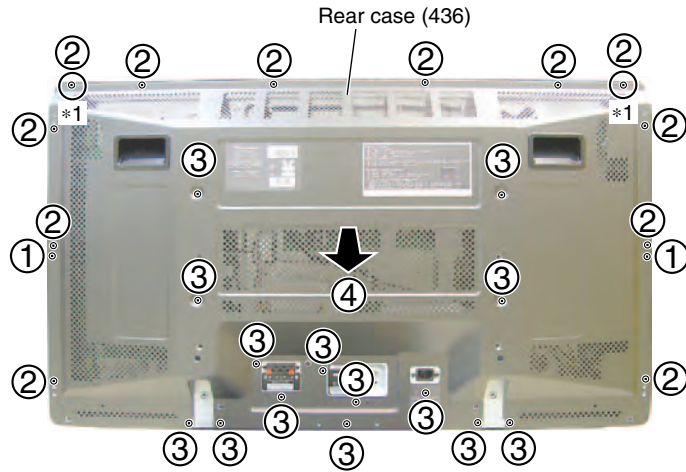
### 1 Rear Case (436)

- ① Remove the two screws.
- ② Remove the twelve screws.
- ③ Remove the fourteen screws.

**Note \*1:**

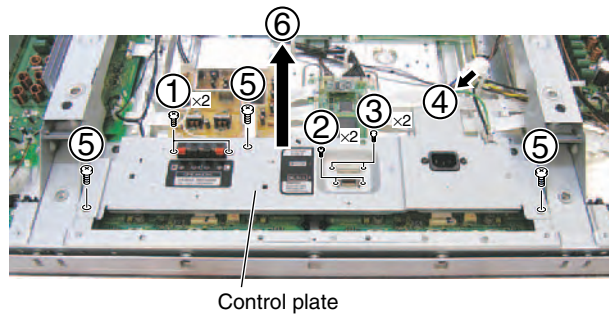
When reassembling, first secure the screws for these holes to position the rear case (436) correctly.  
The hole of a left side, the screw tighten the hole of the right side next first.

- ④ Remove the rear case (436).



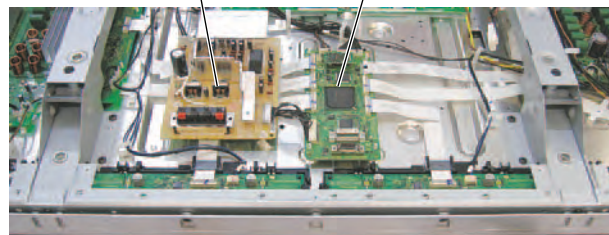
### 2 Control Plate Section

- ① Remove the two screws.
- ② Remove the two screws.
- ③ Remove the two hexagon head screws.
- ④ Disconnect the connector.
- ⑤ Remove the three screws.
- ⑥ Remove the control plate.



HD AUDIO Assy

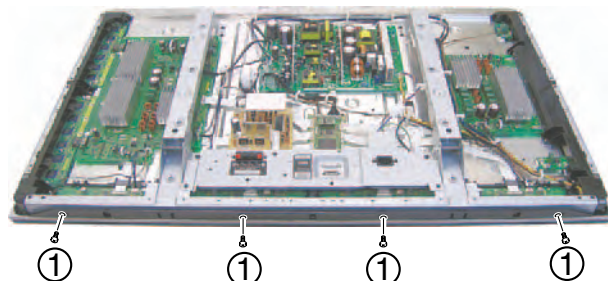
HD DIGITAL Assy



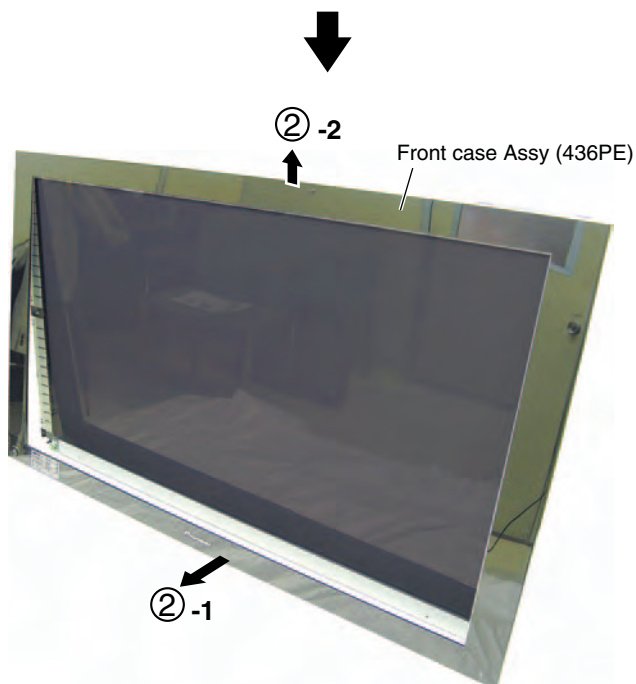


### 3 Front Case Assy (436PE)

- ① Remove the four screw rivets.

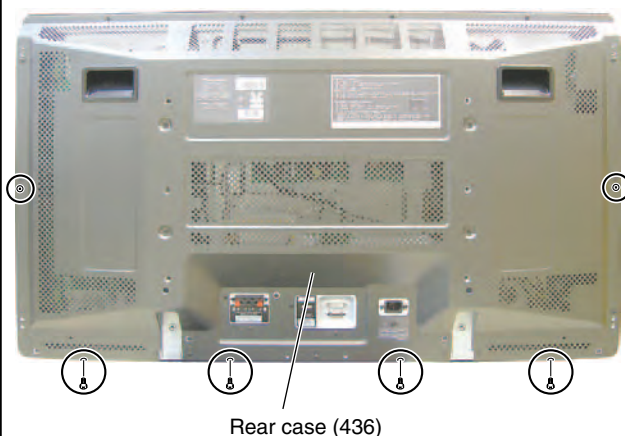


- ② Remove the front case Assy (436PE).



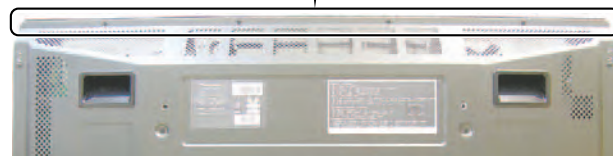
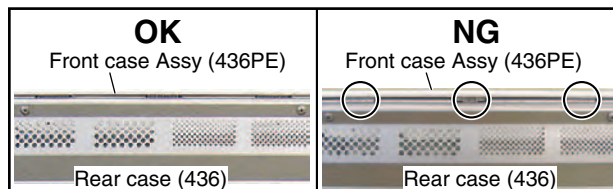
#### • When only the front case assy (436PE) is to be removed

The front case assy (436PE) can be removed without removing the rear case (436) beforehand.  
Remove the two screws and four screw rivets shown below:



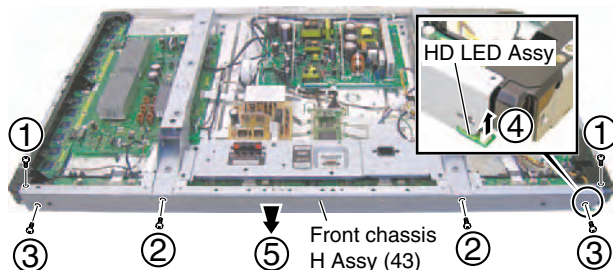
#### • Note when the front case assy (436PE) is to be reattached

- ① Hook the upper part of the Front Case Assy (436PE) on the upper part of the Front Panel, leaving a fist-sized gap between the bottom and the lower part of the Front Case Assy.
- ② Push the couplers of the Front Case Assy (436PE) into the rear case (436).
- ③ Make sure that all the couplers have been pushed into the rear case (436).



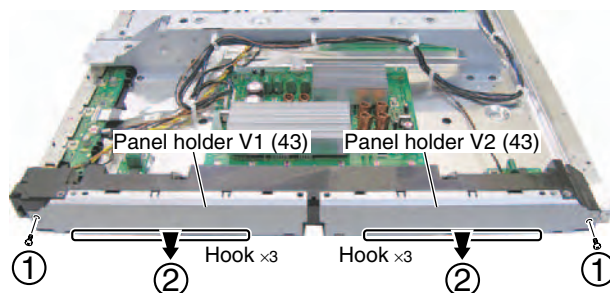
#### A **4 Front Chassis H Assy (43)**

- ① Remove the two screws.
- ② Remove the two screws.
- ③ Remove the two screws.
- ④ Disconnect the connector.
- ⑤ Remove the front chassis H Assy (43).

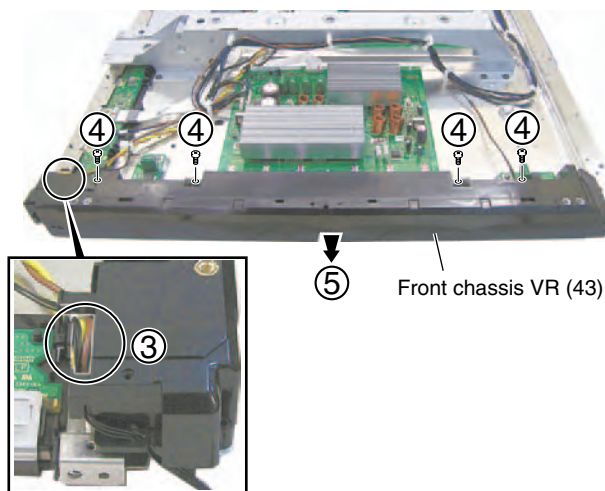


#### B **5 SUS CLAMP 1 and 2 Assys**

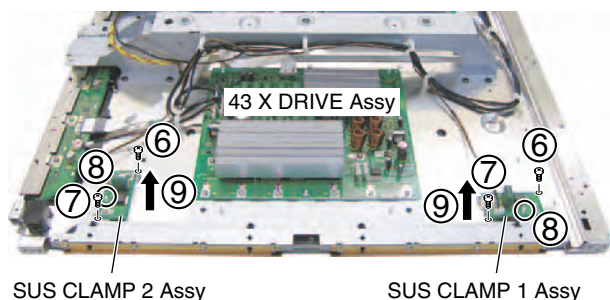
- ① Remove the two screws.
- ② Remove the panel holder V1 (43) and V2 (43)s.  
(Unhook the six hooks.)



- ③ Release the housing wire.
- ④ Remove the four screws.
- ⑤ Remove the front chassis VR (43).

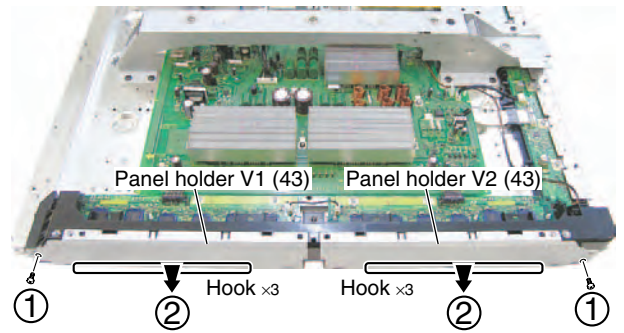


- ⑥ Remove the two screws.
- ⑦ Remove the two screws.
- ⑧ Unhook the two PCB spacers.
- ⑨ Remove the SUS CLAMP 1 and 2 Assys.

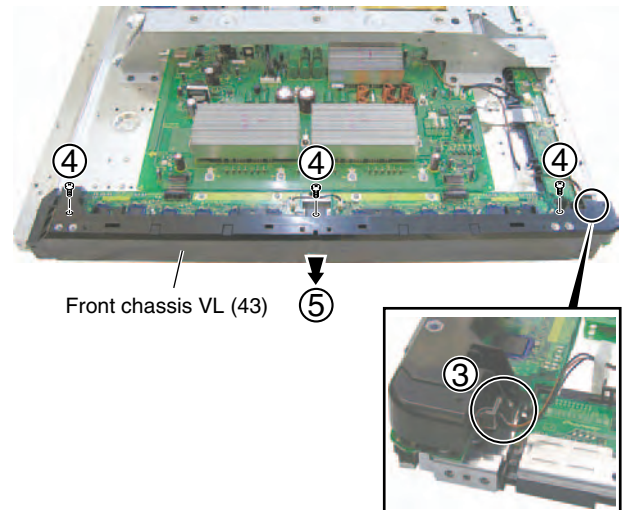


## 6 43 SCAN A and B Assys

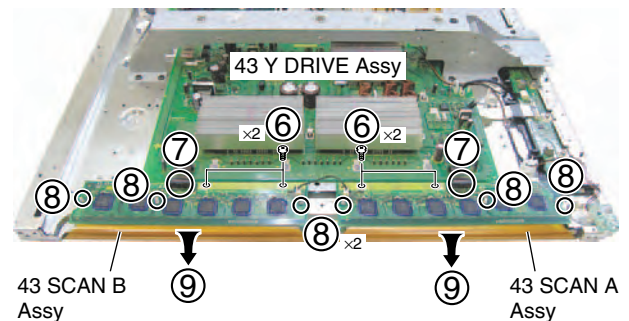
- ① Remove the two screws.
- ② Remove the panel holder V1 (43) and V2 (43)s.  
(Unhook the six hooks.)



- ③ Release the housing wire.
- ④ Remove the three screws.
- ⑤ Remove the front chassis VL (43).



- ⑥ Remove the four screws.
- ⑦ Disconnect the two pin connectors.
- ⑧ Unhook the six PCB spacers.
- ⑨ Remove the 43 SCAN A and B Assys.



7.2 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

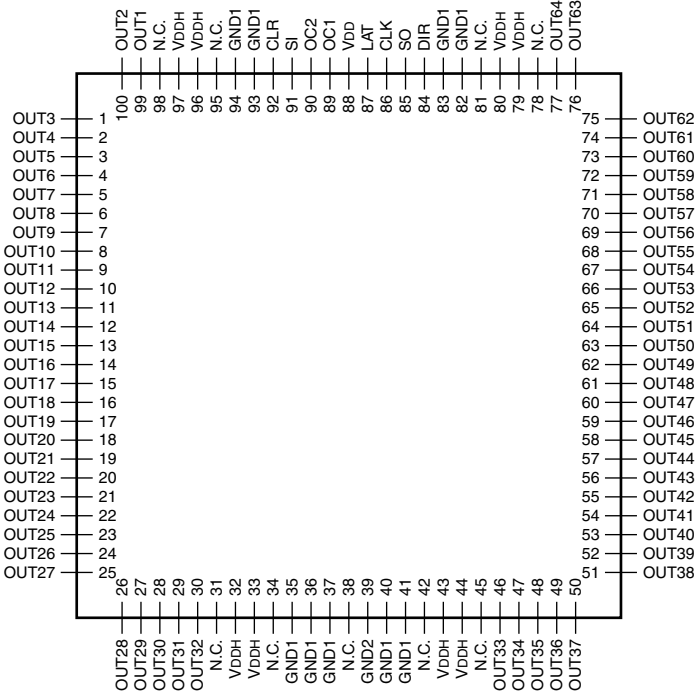
• List of IC

SN755870PZT, TC7SH08FUS1, TC74VHC00FTS1, AXF1143, AXF1145, TC74VHC08FTS1, AXF1144, M62334FP, TC74VHC123AFTS1, PST3610UR, PEG122C, NJW1183L

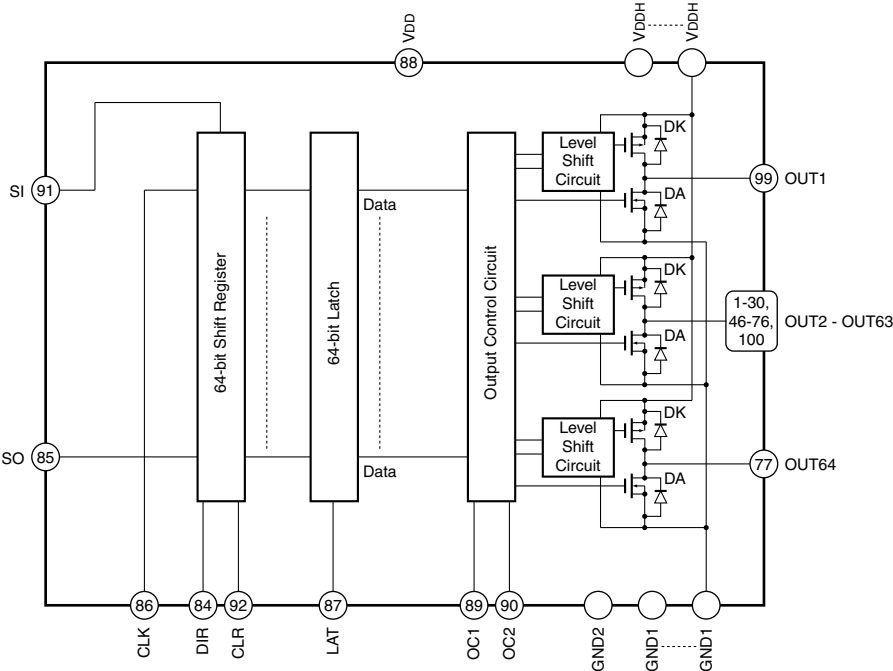
■ **SN755870PZT (43 SCAN A ASSY : IC2701 - IC2706)  
(43 SCAN B ASSY : IC2801 - IC2806)**

• Plasma Display Panel IC

B • Pin Arrangement (Top view)



• Block Diagram



# ● Pin Function

No.	Pin Name	I/O	Pin Function															
1 - 30	OUT3 - OUT32	O	High-voltage push-pull output															
31	N.C.	–	Not connected															
32 - 33	VDDH	–	High-voltage circuit supply															
34	N.C.	–	Not connected															
35 - 37	GND1	–	Ground															
38	N.C.	–	Not connected															
39	GND2	–	Ground															
40 - 41	GND1	–	Ground															
42	N.C.	–	Not connected															
43 - 44	VDDH	–	High-voltage circuit supply															
45	N.C.	–	Not connected															
46 - 77	OUT33 - OUT64	O	High-voltage push-pull output															
78	N.C.	–	Not connected															
79 - 80	VDDH	–	High-voltage circuit supply															
81	N.C.	–	Not connected															
82 - 83	GND1	–	Ground															
84	DIR	I	Setup of shift register shift direction L = Shift into reverse (SO → SI) H = Shift forward (SI → SO)															
85	SO	I/O	Serial data input / output															
86	CLK	I	Serial clock input Fetch SI or SO data to shift register by CLK rise edge															
87	LAT	I	LAT data input L = Transfer shift register data to output latch H = Hold data to output latch															
88	VDD	–	Logic supply															
89	OC1	I	Output control Control output according to the right truth value table <table><tr><th>OC1</th><th>OC2</th><th>OUT</th></tr><tr><td>L</td><td>L</td><td>ALL Hi-Z</td></tr><tr><td>L</td><td>H</td><td>DATA</td></tr><tr><td>H</td><td>L</td><td>ALL L</td></tr><tr><td>H</td><td>H</td><td>ALL H</td></tr></table>	OC1	OC2	OUT	L	L	ALL Hi-Z	L	H	DATA	H	L	ALL L	H	H	ALL H
OC1	OC2	OUT																
L	L	ALL Hi-Z																
L	H	DATA																
H	L	ALL L																
H	H	ALL H																
90	OC2	I																
91	SI	I/O	Serial data input / output															
92	CLR	I	All output reset CLR pin : L → Normal operation CLR pin : H → All output High															
93 - 94	GND1	–	Ground															
95	N.C.	–	Not connected															
96 - 97	VDDH	–	High-voltage circuit supply															
98	N.C.	–	Not connected															
99 - 100	OUT1 - OUT2	O	High-voltage push-pull output															

A

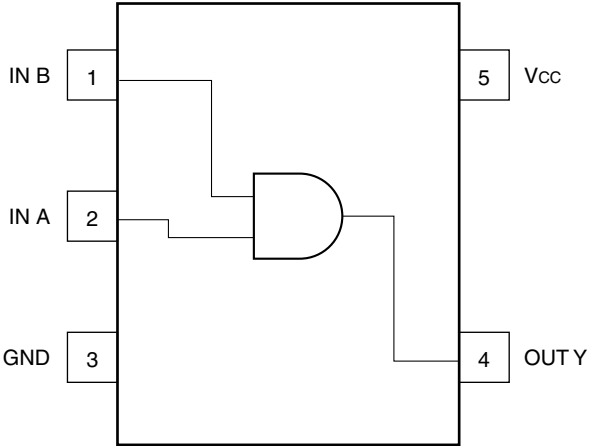
■ **TC7SH08FUS1 (43 SCAN B ASSY : IC2807)**

• 2-input AND Gate

● **Pin Arrangement (Top view) / Block Diagram**

● **Truth Table**

B



A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

C

■

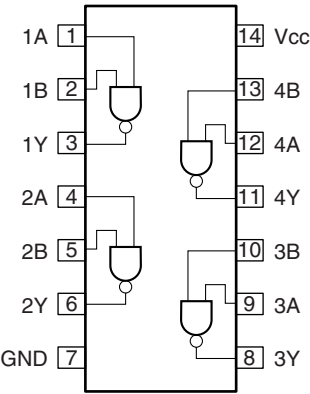
■ **TC74VHC00FTS1 (43 X DRIVE ASSY : IC1002)**

• Quad 2-Input NAND Gate

● **Block Diagram**

● **Truth Table**

E



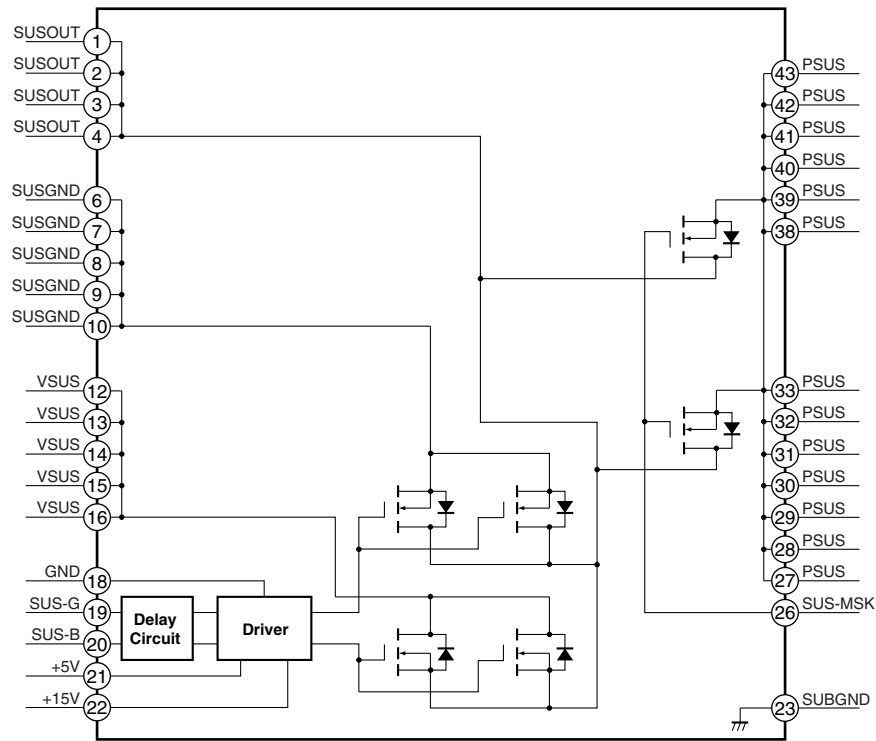
A	B	Y
L	L	H
L	H	H
H	L	H
H	H	L

F

## ■ AXF1143 (43 X DRIVE ASSY : IC1202)

• X Mask Module

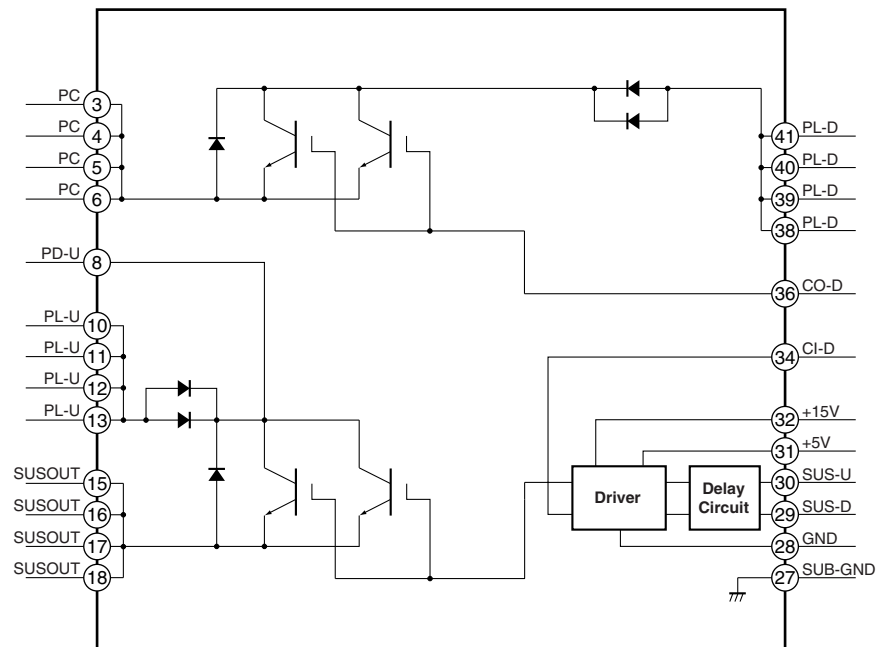
### ● Block Diagram



## ■ AXF1145 (43 X DRIVE ASSY : IC1101) (43 Y DRIVE ASSY : IC2101)

• DK Module

### ● Block Diagram



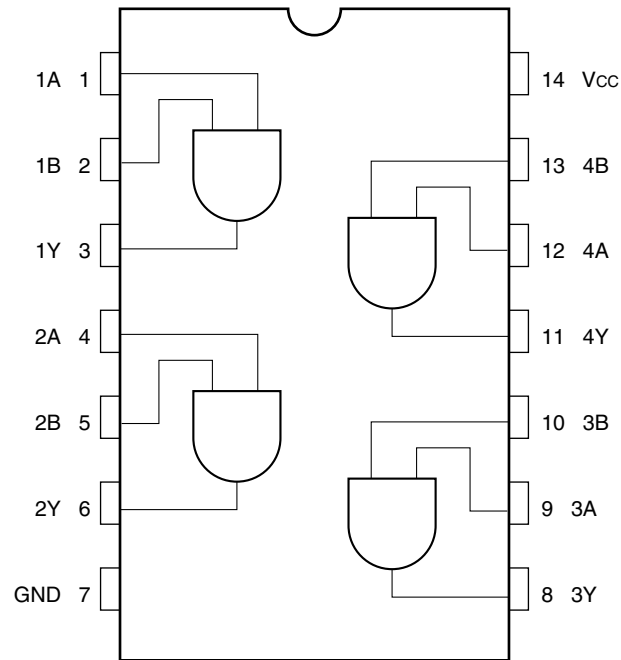


A

TC74VHC08FTS1 (43 Y DRIVE ASSY : IC2003, IC2005)

• Quad 2-input AND Gate

• Pin Arrangement (Top view) / Block Diagram



• Truth Table

A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

B

C

D

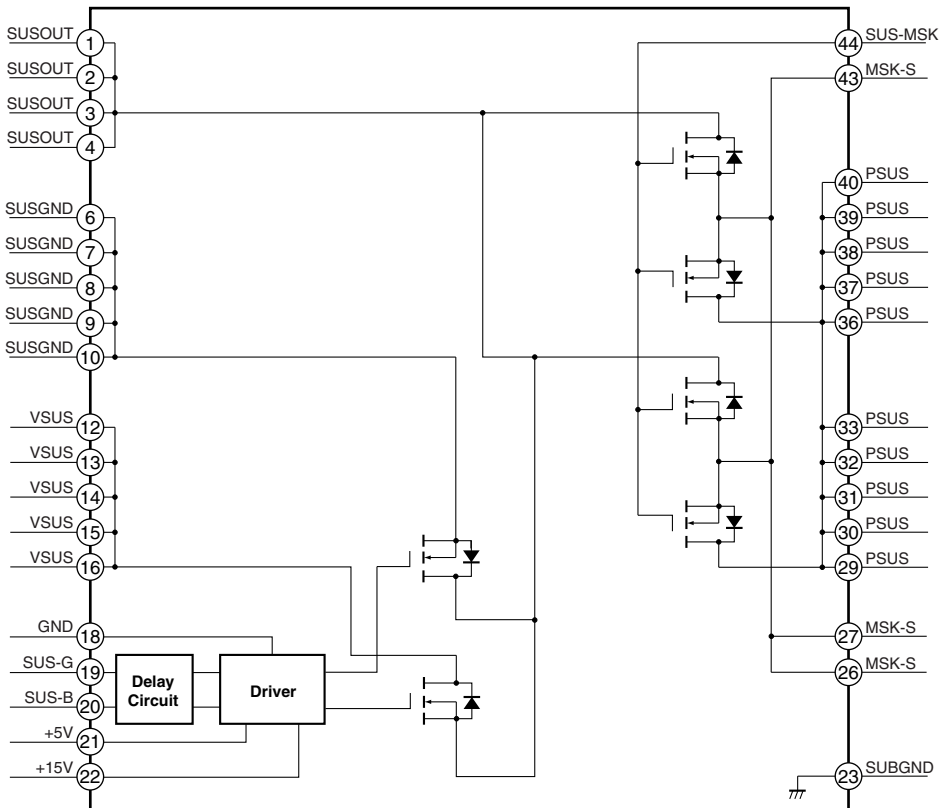
E

F

AXF1144 (43 Y DRIVE ASSY : IC2252, IC2253)

• Y Mask Module

• Block Diagram

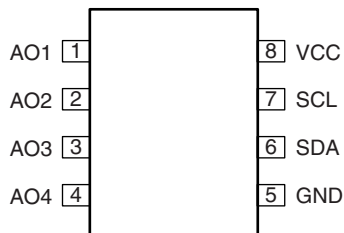




## ■ M62334FP (HD DIGITAL ASSY : IC3157)

• 8-bit 4ch I2C Bus D-A Converter with Buffer Amplifier

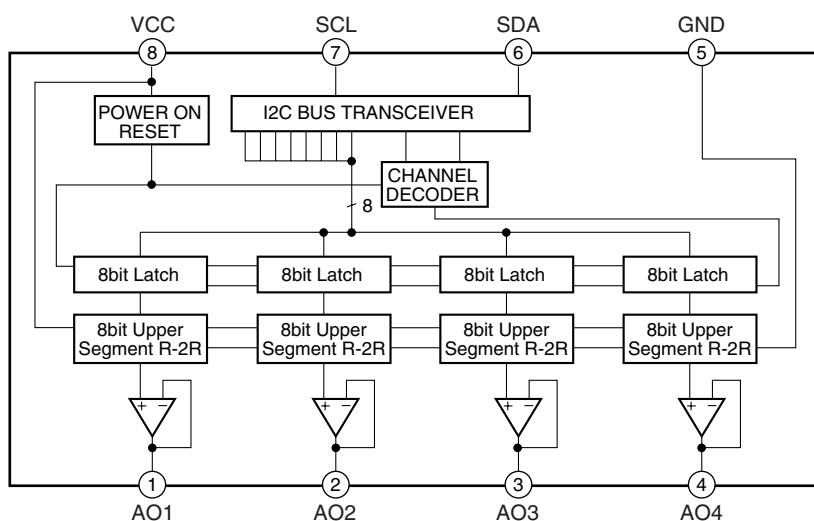
### ● Pin Arrangement (Top view)



### ● Pin Function

No.	Pin Name	Pin Function
1	AO1	8-bit resolution D-A converter output
2	AO2	
3	AO3	
4	AO4	
5	GND	Ground
6	SDA	Serial data input
7	SCL	Serial clock input
8	VCC	Power supply

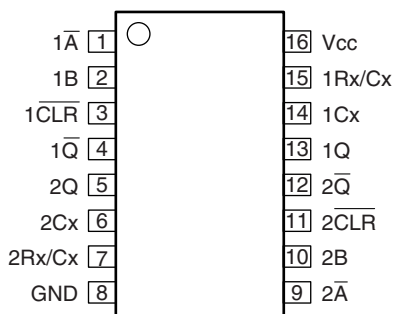
### ● Block Diagram



## ■ TC74VHC123AFTS1 (HD DIGITAL ASSY : IC3160)

• Dual Monostable Multivibrator/AFN/AFT Retriggerable

### ● Pin Arrangement (Top view)



### ● Truth Table

Inputs			Outputs		Note
A	B	CLR	Q	Q̄	
	H	H			Output enable
X	L	H	L	H	Inhibit
H	X	H	L	H	Inhibit
L		H			Output enable
L	H				Output enable
X	X	L	L	H	Reset

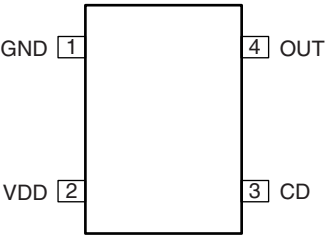
X: Don't care

A

**■ PST3610UR (HD DIGITAL ASSY : IC3304)**  
• Reset IC

B

● Pin Arrangement (Top view)

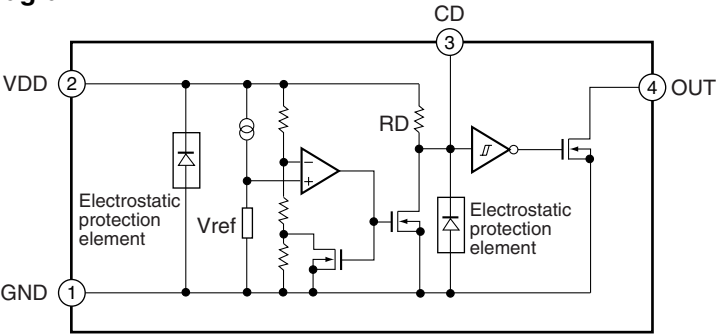


● Pin Function

No.	Pin Name	Pin Function
1	GND	Ground
2	VDD	Power supply / Voltage detection
3	CD	Capacitor connect pin for delay
4	OUT	Reset signal output

C

● Block Diagram



D

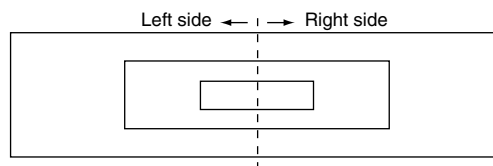
E

F

## ■ PEG122C (HD DIGITAL ASSY : IC3401)

• LSI for PDP video processing (SEQUENCE PROCESSOR)

### ● Pin Arrangement (Top view)



### ● Left side (Top view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	
A	BAI5	GA1	GA4	GA9	RAI4	RAI9	BB10	BB16	GB11	GB15	RB11	RB17	TRNSEND1	A
B	BAI4	GA10	GND33	GA18	RAI3	RAI8	HDI	BB15	GB10	GDN33	RB10	RB16	TRNSEND0	B
C	BAI3	BAI9	VDD33	GA17	RAI2	RAI7	VDI	BB14	BB19	VDD33	GB19	RB15	VDD33	C
D	BAI2	BAI8	GA13	GA16	RAI1	RAI6	DEI	BB13	BB18	GB14	GB18	RB14	RB19	D
E	BAI1	BAI7	GA12	GA15	RAI0	RAI5	DCLKI	BB12	BB17	GB13	GB17	RB13	RB18	E
F	BAI0	BAI6	PEAK	APLDT	THEATER	GND12	VDD12	BB11	VDD12	GB12	GB16	RB12	VDD12	F
G	XSCAN20	XSCAN19	XSCAN18	XSCAN17	XSCAN16	VDD12								G
H	XSCAN15	XSCAN14	XSCAN13	XSCAN12	XSCAN11	VDDTC12								H
J	XSCAN10	GND33	VDD33	XSCAN9	GNDTC12	VDD12								J
K	XSCAN8	XSCAN7	XSCAN6	XSCAN5	XSCAN4	VDDTC12								K
L	XSCAN3	XSCAN2	XSCAN1	XSCAN0	GND12	VDD12								L
M	XSUS10	XSUS9	XSUS8	XSUS7	GNDTC12	VDD12								M
N	XSUS6	GND33	VDD33	XSUS5	GND12	VDD12								N
P	XSUS4	XSUS3	XSUS2	XSUS1	XSUS0	VDDTC12								P
R	ADRS0	ADRS1	ADRS2	ADRS3	GNDTC12	VDD12								R
T	TEST_I0	GND33	VDD33	TEST_I1	TEST_I2	TEST_R								T
U	TXOUTM063	TXOUTP063	GNDLA	VDDLA	GNDLA	VDDL12								U
V	TXCLKOUTM06	TXCLKOUTP06	GNDLA	VDDLA	GNDLA	VDDLA								V
W	TXOUTM062	TXOUTP062	GNDLA	VDDLA	GNDLA	VDDLA								W
Y	TXOUTM061	TXOUTP061	GNDLA	VDDLA	GNDLA	VDDL12								Y
AA	TXOUTM060	TXOUTP060	GNDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	AA
AB	TXOUTM073	TXOUTP073	GNDLA	VDDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	VDDBG	REFIN		AB
AC	TXCLKOUTM07	TXCLKOUTP07	GNDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	AC
AD	TXOUTM072	TXOUTP072	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	AD
AE	TXOUTM071	TXOUTP071	GNDLA	TXOUTP033	TXCLKOUTP03	TXOUTP032	TXOUTP031	TXOUTP030	TXOUTP023	TXCLKOUTP02	TXOUTP022	TXOUTP021	TXOUTP020	AE
AF	TXOUTM070	TXOUTP070	GNDLA	TXOUTM033	TXCLKOUTM03	TXOUTM032	TXOUTM031	TXOUTM030	TXOUTM023	TXCLKOUTM02	TXOUTM022	TXOUTM021	TXOUTM020	AF

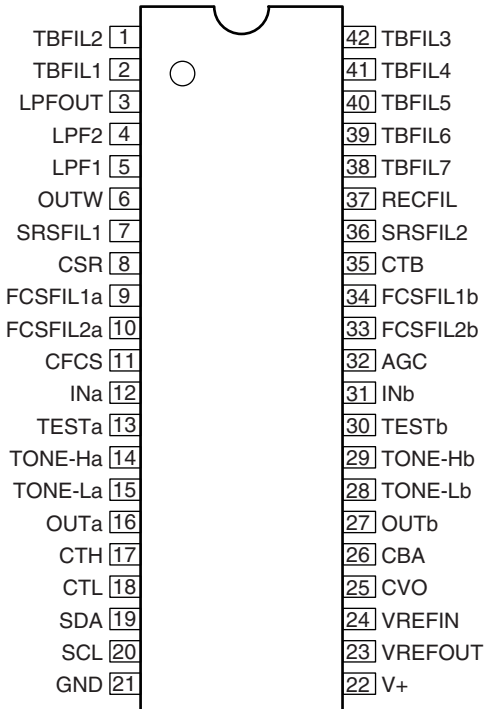
### ● Right side (Top view)

	14	15	16	17	18	19	20	21	22	23	24	25	26	
A	CLKD	VSSPA	EXDI011	EXDI09	EXA4	EXA10	EXA2	EXA16	EXA20	CSCS_N1	CSCS_N2	CSIORCK1	CSIORXD	A
B	CSRND_N	VCCPA	EXDI04	GND33	EXA3	EXA9	EXA1	EXA15	EXA19	CSCS_N0	GND33	TCRAM_MONITOR0	TCRAM_MONITOR1	B
C	CLKS	CLK_MONI	EXDI012	VDD33	EXDI00	EXA8	CSWR_N	EXA14	EXA18	UARTRXD	VDD33	TCRAM_MONITOR2	CSIORQ	C
D	VSSPB	EXDI014	EXDI05	EXDI02	EXDI08	EXA7	EXA0	EXA13	EXA17	UARTTXD	CS10TXD	RESETX	SDIUTAG	D
E	VCCPB	EXDI07	EXDI013	EXDI010	EXDI01	EXA6	EXA11	EXA12	CSEXWAIT_N	SDITRST_N	SDITCK	SDIDBI_N	SDITMS	E
F	LPFMONI	EXDI015	EXDI06	EXDI03	VDD12	EXA5	VDD12	GND12	SDITDO	SDITDI	GPI000	GPI001	GPI002	F
G								VDD12	GPI003	GPI004	GPI005	GPI006	GPI007	G
H								VDDTC12	YSCAN20	YSCAN19	YSCAN18	YSCAN17	YSCAN16	H
J								VDD12	GNDTC12	YSCAN15	VDD33	GND33	YSCAN14	J
K								VDDTC12	YSCAN13	YSCAN12	YSCAN11	YSCAN10	YSCAN9	K
L								VDD12	GND12	YSCAN8	YSCAN7	YSCAN6	YSCAN5	L
M								VDD12	GNDTC12	YSCAN4	YSCAN3	YSCAN2	YSCAN1	M
N								VDD12	GND12	YSCAN0	VDD33	GND33	VSUS10	N
P								VDDTC12	YSUS9	YSUS8	YSUS7	YSUS6	YSUS5	P
R								VDD12	GNDTC12	YSUS4	YSUS3	YSUS2	YSUS1	R
T								YSUS0	RSV1	RSV0	VDD33	GND33	AFE_PS_N	T
U								VDDL12	GNDLA	VDDLA	GNDLA	TXOUTP050	TXOUTM050	U
V								VDDLA	GNDLA	VDDLA	GNDLA	TXOUTP051	TXOUTM051	V
W								VDDLA	GNDLA	VDDLA	GNDLA	TXOUTP052	TXOUTM052	W
Y								VDDL12	GNDLA	VDDLA	GNDLA	TXCLKOUTP05	TXCLKOUTM05	Y
AA	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDLA	VDDLA	GNDLA	TXOUTP053	TXOUTM053	AA
AB	VREF12	GNDBG	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	VDDLA	GNDLA	TXOUTP040	TXOUTM040	AB
AC	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	GNDLA	GNDLA	TXOUTP041	TXOUTM041	AC
AD	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	TXOUTP042	TXOUTM042	AD
AE	TXOUTP013	TXCLKOUTP01	TXOUTP012	TXOUTP011	TXOUTP010	TXOUTP003	TXCLKOUTP00	TXOUTP002	TXOUTP001	TXOUTP000	GNDLA	TXCLKOUTP04	TXCLKOUTM04	AE
AF	TXOUTM013	TXCLKOUTM01	TXOUTM012	TXOUTM011	TXOUTM010	TXOUTM003	TXCLKOUTM00	TXOUTM002	TXOUTM001	TXOUTM000	GNDLA	TXOUTP043	TXOUTM043	AF

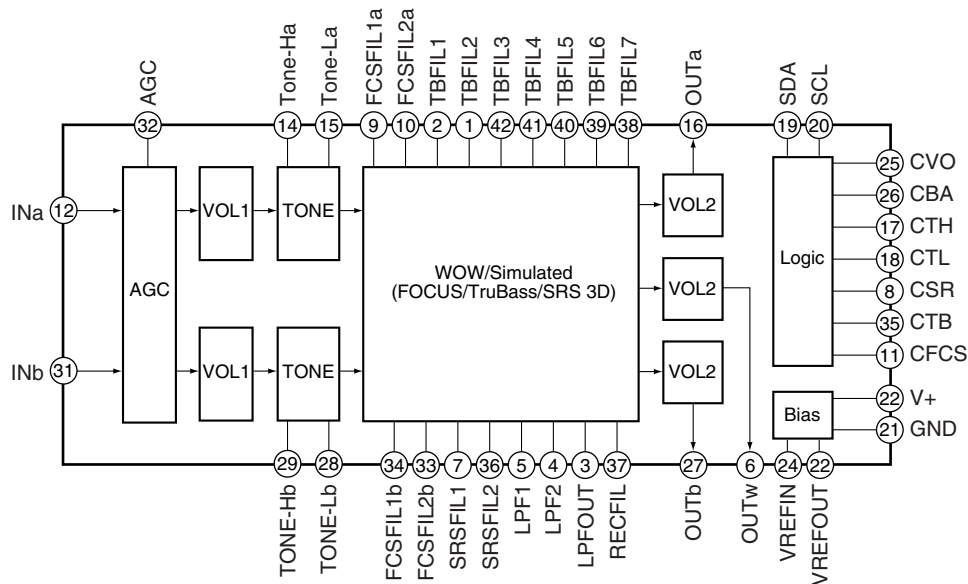
## ■ NJW1183L (HD AUDIO ASSY : IC3753)

• FOCUS & SRS IC

### ● Pin Arrangement (Top view)

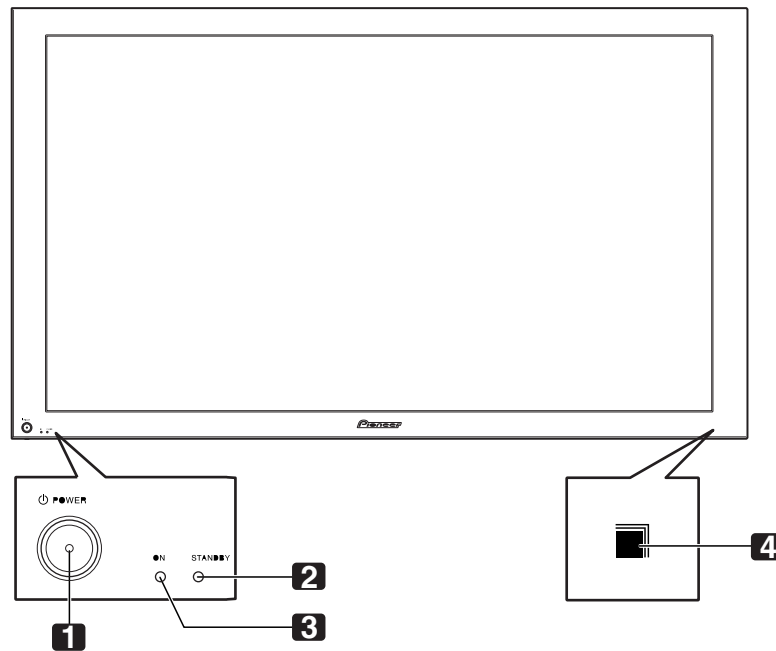


### ● Block Diagram



## 8. PANEL FACILITIES

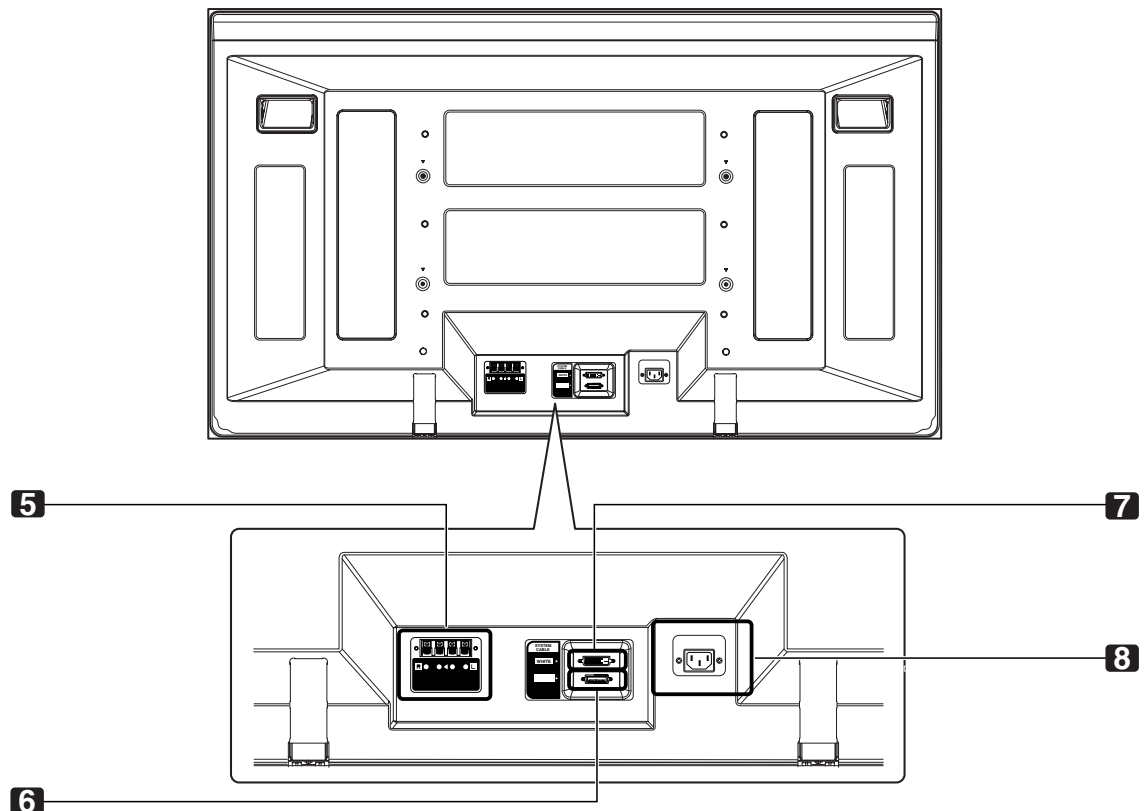
### Front view



- 1 POWER button
- 2 STANDBY indicator

- 3 POWER ON indicator
- 4 Remote control sensor

### Rear view



- 5 SPEAKER (right/left) terminals
- 6 SYSTEM CABLE terminal (BLACK)

- 7 SYSTEM CABLE terminal (WHITE)
- 8 AC IN terminal

A

Jigs list

Jig No.	Jig Name	Remarks
GGF1475	Special Communication Device	See to "6.2 RS-232C COMMAND".

B

C

D

E

F